

Rinnai



REFERENCE GUIDE

Hot Water

Experience Our Innovation



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Experience our Innovation

For 40 years Australians have been enjoying the comfort, convenience and reliability of Rinnai gas appliances. Our innovative products are designed with the environment in mind, with low emission technology and high efficiencies, as well as a host of other great features.

Rinnai is committed to ongoing innovation - delivering efficient, well designed and engineered lifestyle solutions offering a host of benefits including versatility, safety, control, water conservation as well as guaranteed reliability. Backed with extensive warranties and after sales service teams, Rinnai is proud to be the No.1 choice for Continuous Flow Hot water in Australia. In addition, our innovative range of Solar Hot Water Systems boast market leading efficiencies that ultimately enjoy higher Government rebates.

Through innovation, we will endeavour to continue offering superior ranges of home appliances that provide a clear insight into what the future holds for Australian homes

About this Brochure

This 'Hot Water Reference Guide' is to be used in conjunction with the consumer brochure. The contents of this brochure are more of a technical nature and it has been produced in relevant technical sections rather than by specific product pages as in the consumer brochure.

It is designed to be a quick reference guide to questions that may be asked to ensure selection of the best hot water solution for an application.

Need additional help?

Please contact Rinnai Customer Care on 1300 555 545
Monday to Friday 8.00am – 5.30pm EST

Associations & Certificates





GAS
ENERGY RATING

20 321

NOTE: THIS STAR ENERGY RATING DOES NOT INCLUDE ENERGY CONSUMED BY THE "SMARTSTART" FUNCTION

Rinnai INFINITY **26**

Smartstart®
Water Saver



Range Overview – Hot Water

Rinnai has an extensive range of hot water systems that cater for both domestic & commercial applications. Each range has specific and unique benefits which are explained both below and throughout this brochure.

Gas Continuous Flow

- Only heats the water when it is needed
- Highly efficient and compact allowing flexibility in installation options
- Additional Water Controllers add precise temperature control for convenience & safety as well as a host of other benefits
- Designed with low burner settings making them the most compatible with lower flow rated (WELS) showers & basin outlets
- Largest range of models suiting varied domestic, builders & commercial markets
- Available in 60°C preset or 50°C adjustable to True 50°C at the Tap
- Internal, Enviro (high efficiency condensing) and Inbuilt Smartstart models available
- Extensive accessory options – Recess Boxes, Pipe Covers, Flue Diverters, Smartstart® and Security Brackets

HANDY HINT

By adding 2 or more Water Controllers, the Parts & Labour warranty is automatically increased from 3 to 5 years



Solar Systems

- Utilises the energy from the sun to pre-heat the water
- Benefits of low running costs and low greenhouse emissions
- Close Coupled roof or split ground mounted systems
- Choice of superior quality long-life Stainless Steel with extensive warranties or durable Vitreous Enamelled steel cylinders
- Selection of Solar Collectors in both Standard & Frost Tolerant (FTC) configurations, and the new E-frost Collector for Split Systems installed in high frost areas
- Full range of sizes to suit all domestic applications & climates
- Choice of 2 gas booster sizes to suit small to large homes
- Internal solar booster also available
- Choice of electric element sizes enabling easy changeover from old electric systems
- Substantial Government rebates and incentives apply for most domestic installations



Solar Split System

HANDY HINT

Gas Boosted Systems are awarded far higher rebates than Electric Boosted Systems and this should always be considered when deciding on the system type and comparing costs.



Solar Close Coupled System

Mains Pressure Electric Storage

- Full range of capacities to suit all requirements - 40 to 400 litres
- Flexibility of various element sizes with dual handed connections making them ideal for replacing older systems
- High quality durable Vitreous Enamel steel construction
- Flexibility - suitable for internal and external use
- Thermostatically controlled with safety temperature shut off for added safety and peace of mind

HANDY HINT

Always err on the high side when sizing electric systems. Under sizing can result in a lack of hot water and very unhappy customers!

Gravity Feed Electric Storage

- Low pressure gravity feed electric boosted systems
- Designed to be concealed in roof spaces
- Full copper cylinder with long life expectancy as unit not under mains pressure
- Suitable to be installed in conjunction with Solar Collectors to economically pre-heat the water
- Suitable for connection to a combustion stove pre-heat circulation system in addition to solar – best of both!
- Available in a model with a built-in heat exchanger coil for mains pressure capability.

HANDY HINT

Because the hot water is gravity fed, the piping to the outlets & showers is usually run in $\frac{3}{4}$ " (20mm) to ensure adequate water flow!



Commercial Hot Water Systems

- Heavy Duty Continuous Flow units – smaller Commercial applications
- Manifold Packs – multiple units plumbed together with a maximum flow rate sized to suit a set number of outlets (ie shower block with pre-set outlet temperature)
- Demand Duo – single or multiple units manifolded together in conjunction with storage cylinders. Stored hot water assists with 'peak demand' periods like mornings in a hotel.
- Warm Water Systems designed for flow & return installations
- Commercial Solar pre-heat systems
- Natural draft common flues available for internal models



Continuous Flow Hot Water

Range at a glance

Rinnai has the largest range of Continuous Flow water heaters in Australia today. As the company that developed the Continuous Flow market, we now have 6 dedicated ranges designed for specific applications.

The table below highlights the basic differences between the ranges as a general guide:

	Rinnai INFINITY	Rinnai Enviro	Rinnai 26 Smartstart®	Rinnai Builders Series	Rinnai Heavy Duty (HD-Series)	Rinnai S-Series
Range						
External Models	5	2	1	3	2	2
Internal Model	1	-	-	-	1	1
Efficiency	5+ Star	6.8 and 7.0 Star Equiv	5.1 Star	5+ Star	5+ Star	N/A
Primary Use	Domestic	Domestic Builders, Projects & Commercial	Domestic	Builders & Projects	Commercial	Solar Boost Only
Water Controller	Compatible	Compatible	Compatible	Compatible	Compatible	Not Compatible
Status Monitor	26Plus Only	No	No	No	Yes	No
Colour	Euro White	Star Metallic	Euro White	Dune	Titanium	Dune
Pre-Set Temp	50°C & 60°C	60°C	50°C	50°C & 60°C	50°C & 75°C	70°C

Selection Guide & Sizing

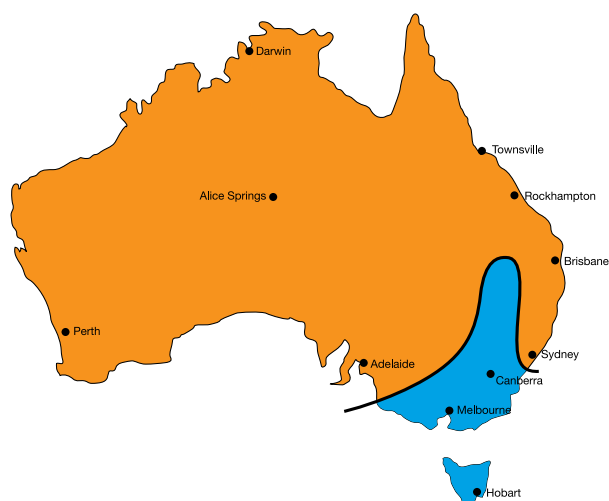
To ensure that the best Continuous Flow unit is installed in any application, we recommend breaking it down to 6 basic considerations:

1. How many Showers are there?

A single bathroom home with a single shower outlet will operate using the smaller 16 or 20 litre model, whereas with multiple bathrooms or showers with 2 roses, then you may need to factor in the likelihood of simultaneous demand. In this case the larger 26 or 32 litre unit would be required.

2. What is the Geographical location?

Ambient water temperatures vary immensely throughout Australia. Please refer to the below map and table as a guideline only:



Climate	Number of Bathrooms The number of shower outlets the unit can supply is dependant on water pressure, ambient water pressure and outlet water flow capacity. (Based on 3 Star, 9L/min)		
	1	2	3
Warm	16 to 20 Litre	16 to 26 Litres	26 to 32 Litre
Cool	16 to 20 Litre	20 to 26 Litres	26 to 32 Litre

3. The type of shower roses installed?

Most States and Territories have legislation where new homes must have a minimum of 3 Star rated (9 litre/min) shower roses installed. Many older homes however, still have higher flow rated showers.

HANDY HINT

We recommend to replace shower roses with low flow rated (WELS approved) fixtures to assist with water conservation. Rinnai Continuous Flow models are more suited to lower flow rates than other units on the market.

4. Is there a large bath or spa?

If there is a large bath or spa that needs filling, then regardless of the number of bathrooms or showers, we'd recommend the larger 26 or 32 litre.

5. Design of the house? (The distance to the furthest tap)

Where are the bathrooms and other 'wet areas' in relation to the hot water system? The further away the shower, the longer it takes to get the hot water. Typically if the distance to an outlet is 15m or greater you could be looking at a time delay for the hot water of approximately 10-15 seconds.

As a general rule, Rinnai recommend:

- Units are best installed closest to the Kitchen – but with consideration to Bathroom locations
- New homes could consider two smaller units if hot water is required at opposite ends of home
- For long hot water runs, install a Rinnai Smartstart® pre-heat flow and return system

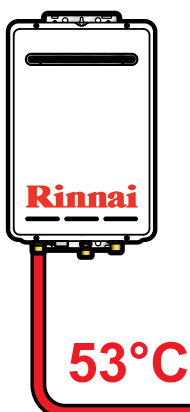
6. Is it an Internal or External Installation?

Most installations are external. This is by far the least expensive alternative with the unit readily accessible for servicing. Alternatively Rinnai have internal units which can be placed inside the house, in a cupboard or even in the ceiling cavity. All Rinnai internal units require a flue to be installed to atmosphere. For further details of the flueing requirements, please refer to pages 9 to 11.

Hot Water Delivery Temperature

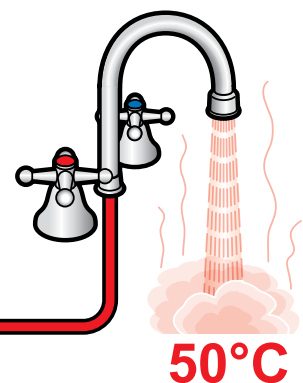
AS/NZS3500 regulates that the temperature allowed in areas used primarily for personal hygiene (Bathrooms, Ensuites and Powder Rooms) must be limited to a maximum of 50°C in domestic installations. There are 2 ways to achieve this with Rinnai Continuous Flow appliances:

- 1. Preset 60°C Appliances** – The installing plumber supply's and installs an approved Tempering Valve on the hot water branch line to the bathrooms etc set at a maximum of 50°C. This then allows for the hotter 60°C water to be supplied to the kitchen & laundry which is best for cutting greases and rinsing. Whilst this requires the additional expense of a Tempering Valve, it is Rinnai's preferred method of installation as it gives the end-user the best hot water solution.
- 2. Preset 50°C Appliances** – This is where the unit is factory set to 50°C and the entire house is supplied at this temperature. This is adequate in most domestic situations, but any temperature losses in the pipe work due to poor or old insulation can result in lower temperatures being delivered at the outlet. This is usually noticeable in the kitchen when trying to wash dishes with (say) 46 or 47°C. Previously there was no way of overcoming this other than re-insulating supply lines until now.



Rinnai Preset 50°C Now adjustable to give True 50°C at the Tap

Recent amendments to AS3498 allows for the introduction of adjustable 50°C Preset appliances. Similar to Tempering Valves, the installing plumber can now measure the temperature at the outlet with a thermometer and if necessary, adjust the Rinnai Continuous Flow unit. This can be done in increments of 1°C to a maximum of 4°C.



Water Controllers

Why install Water Controllers?

Rinnai strongly recommend installing Controllers to allow you to take full advantage of all the benefits available. Water Controllers, depending on the model selected, enable the following additional benefits with any Continuous Flow model with the exception of Solar Boost units:

All Controllers:

- Eliminate temperature fluctuations if someone else turns on another tap
- Allow the user to pre-set safe temperatures
- Enable precise temperature control up to 50°C in the Bathrooms and up to 60°C in the Kitchen
- Conserve water usually wasted juggling the hot & cold taps
- Installing 2 Controllers extend the Parts & Labour warranty of the Rinnai INFINITY by 2 years to 5 years
- Activate the Rinnai Smartstart® pre-heat function (see page 16 for details)
- Install up to 4 Controllers (some limitations apply, see below)

Universal (Wired) Controllers

- Ideal for new homes and renovations where easy access to running wires is appropriate
- Are a cost effective model with basic functionality including temperature control & room priority transfer
- Available in Grey only

Universal Wireless Controllers:

- Enable Controllers to be easily fitted into new homes & extensions
- Ideal for retrofitting into existing homes
- Same functions as the 'wired' Universal Controllers
- Additional Child Lock function for added safety
- Requires a transceiver to be connected to the hot water unit
- Additional Wireless Controllers can operate on the same transceiver
- Available in Silver only

Deluxe Controllers:

- Enable Controllers to be easily fitted into new homes & extensions
- Master Controller usually installed in the Kitchen
- Separate Bathroom Controllers
- All functions as per Universal Controller

Deluxe functions include:

- Automatic bath fill function (Bathroom controller only)
- Shower saver feature - preset desired litres (Bathroom controller only)
- Digital clock
- Speaker & volume controls
- Available in White or Silver



HANDY HINT

Regardless of whether Water Controllers are installed or not, to comply with AS3498- delivery of 50°C to ablution areas, a 50°C preset unit or 60°C unit with a tempering valve must be installed.

Maximum number of Water Controllers

A maximum of 4 Water Controllers can be fitted to all Rinnai Continuous Flow water heaters. Any combination of Universal Wireless or Wired or Deluxe Water Controllers can be used with the following provisions:

1. Only ONE Deluxe Master Water controller can be installed
2. Up to TWO Deluxe Bathroom Water Controllers
3. The FOURTH Water Controllers MUST BE a Universal Controller (Wired or Wireless)

Internal Flueing

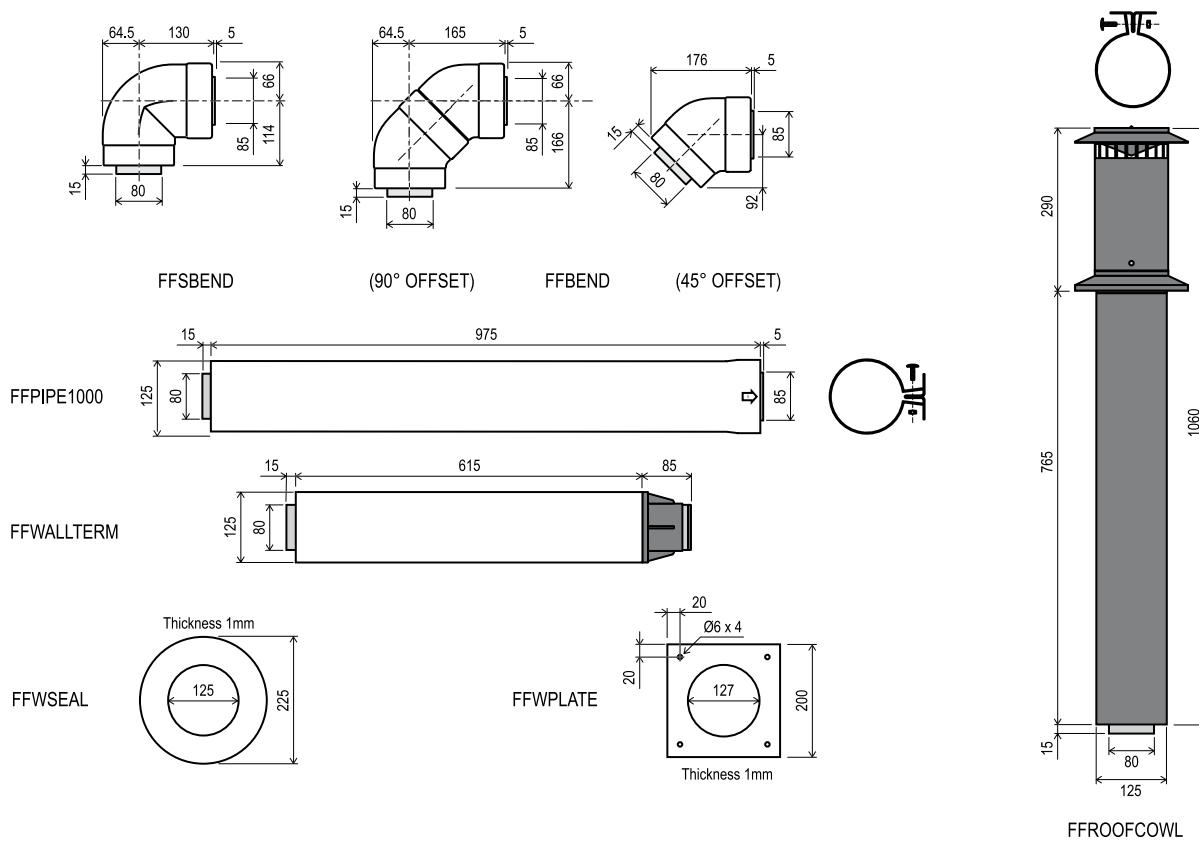
Rinnai offer three 26 litre internal models - the Rinnai INFINITY 26i domestic unit, the HD200i commercial model and the S26i solar booster. Ideal for replacement of existing internal hot water systems or simply used when limited space is available externally in applications such as apartments and townhouses. It is a balanced flue, room sealed appliance, drawing combustion air from the outside.

There are 4 flueing options that enable the installation of an internal Continuous Flow model virtually anywhere:

1. **Vertical Direct Flueing** - Straight up through the ceiling and penetrating the roofline
2. **Horizontal Direct Flueing** - 90° bend off top of unit, backwards or sideways through the wall
3. **Horizontal Extended Flueing** - Identical to horizontal flueing but with additional components to extend the length of the flue
4. **Combination Flueing** - Mixture of both horizontal and vertical flues

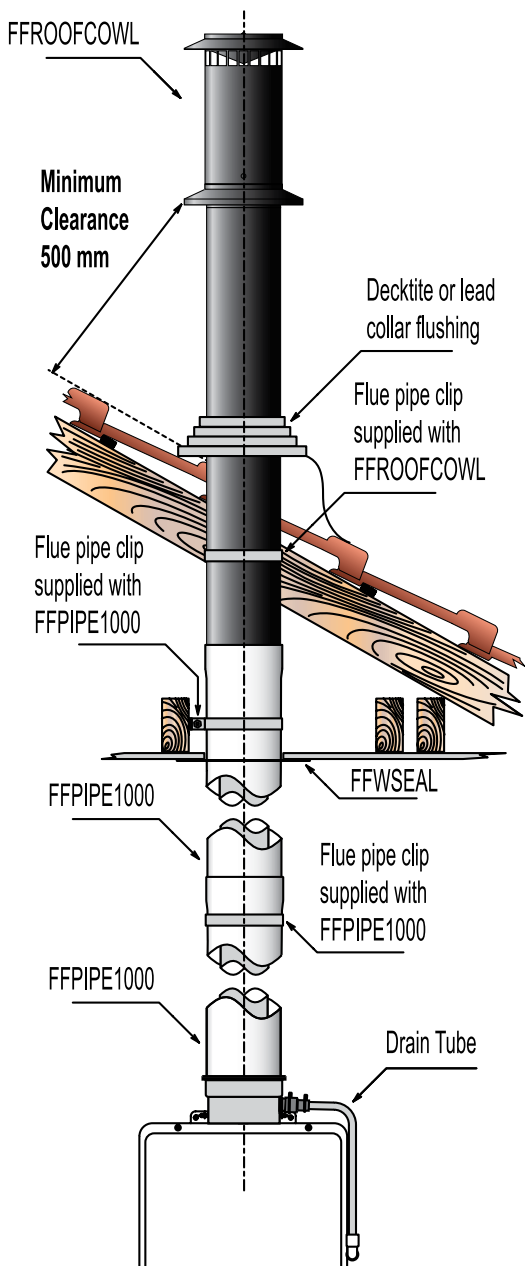
Flue Components

All Rinnai Internal Flue systems are made up from individual components. All components must be ordered separately.



Dimensions in mm

Description	Code Number
Starter Bend	FFSBEND
Universal 45/90 Degree Bend	FFBEND
Flue Pipe 1000mm length	FFPIPE1000
Horizontal Flue Terminal	FFWALLTERM
Vertical Flue Terminal	FFROOFCOWL
Ceiling Ring	FFWSEAL
Wall Plate	FFWPLATE



Vertical Direct Flueing

This is the most common system sold with flueing directly above the unit penetrating the roof line in a single storey home.

The following components will be required in these combination:

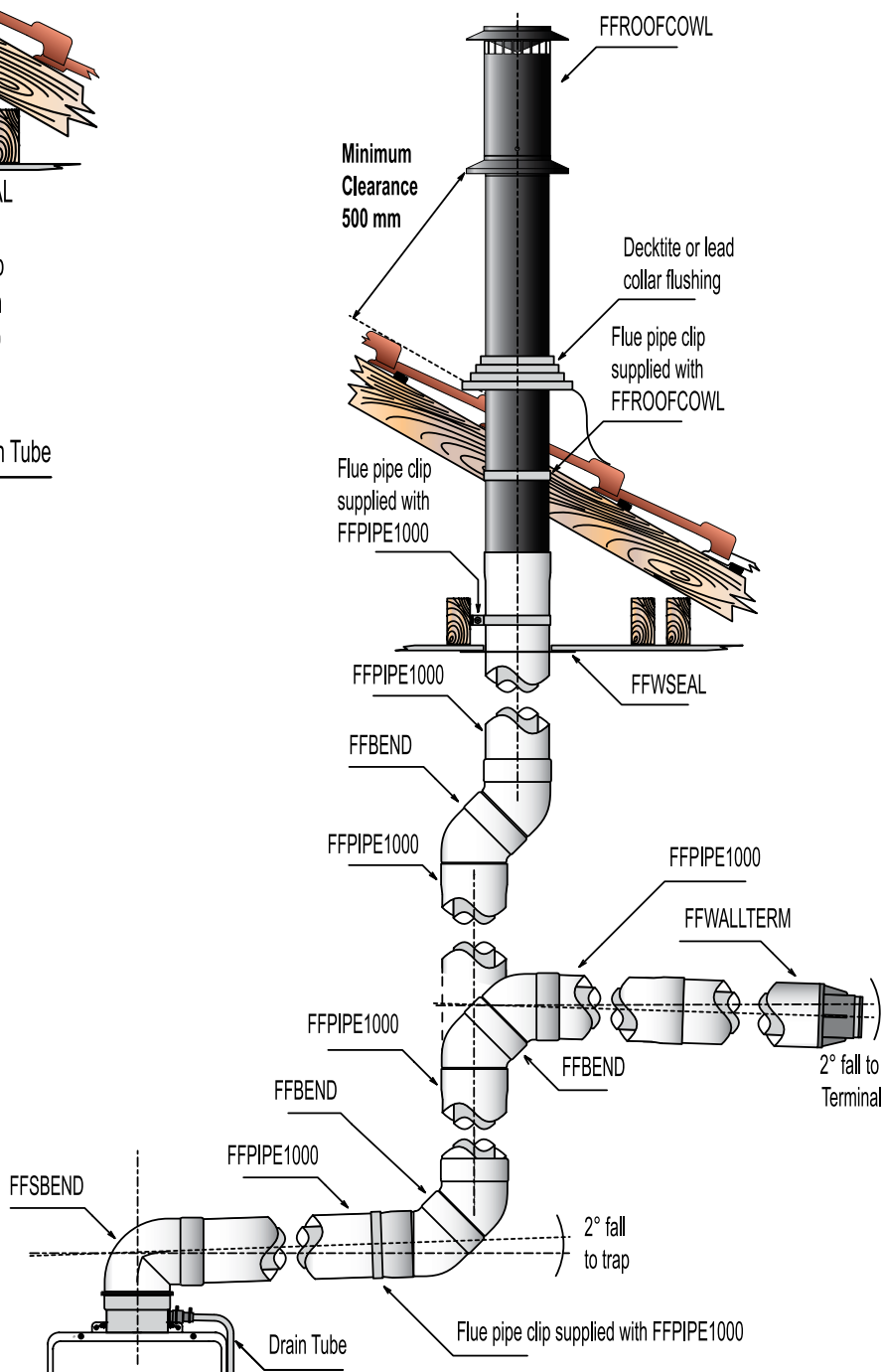
- Vertical Flue Terminal with roof cowl
- Additional Flue lengths (if required)
- Ceiling/Wall Ring (Cover plate)

Note: For vertical installations over 1.5m a condensate drain tube is also required.

Combination Flueing (Vertical and Horizontal)

(Multiple bends with a vertical or horizontal flue termination)

The flexibility of the various Rinnai flueing components enables our Continuous Flow internal models to be installed virtually anywhere, using a roof or wall terminal, extension pieces (mounted vertically and horizontally), bends, adaptors and condensate traps as required.

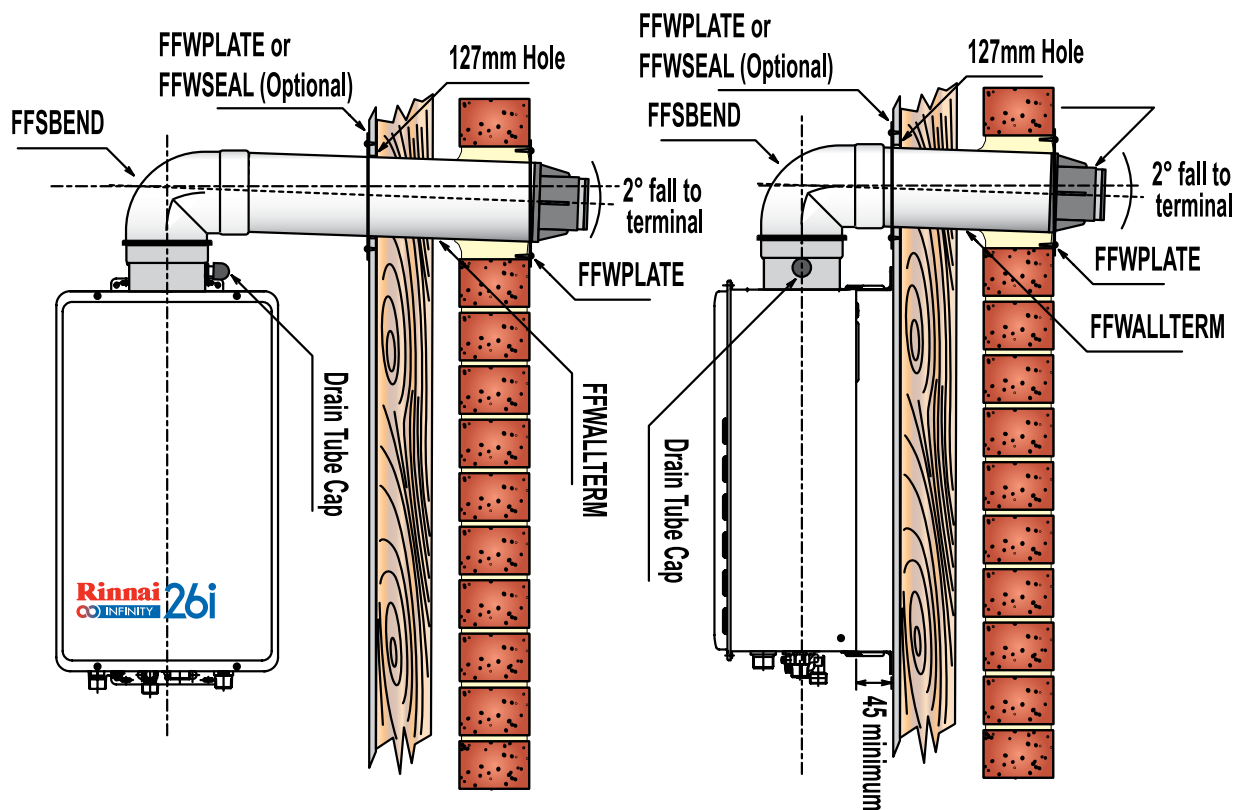


Horizontal Direct Flueing

The second most common system where the Continuous Flow model is flued directly out through a back or side wall.

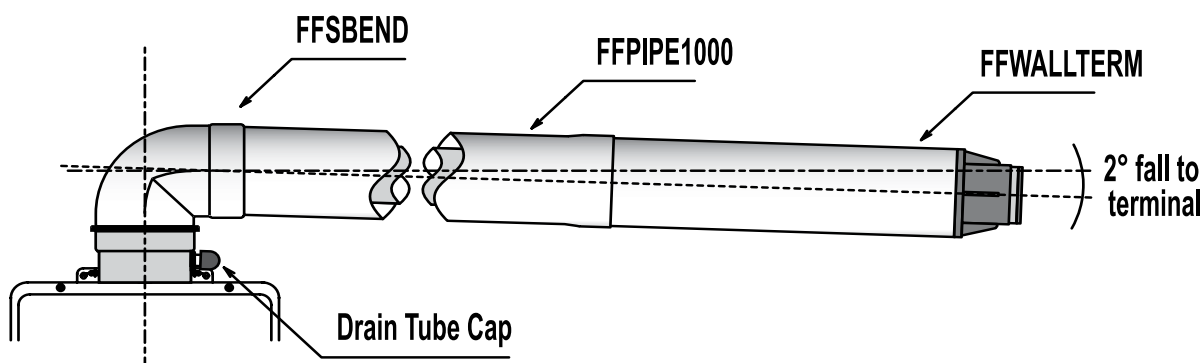
For this installation you will require the following components:

- 90° Bend & Starter
- Horizontal Flue Terminal (in desired lengths)
- External Wall plate
- Ceiling/Wall Ring (Cover plate)



Horizontal Extension Flueing

This option is used when the water heater is mounted against an internal wall and flueing needs to extend horizontally to exit an external wall. Rinnai flueing components must be used together with extension pieces and bends as required.



Important Flueing Rules

1. Installations can consist of both horizontal and vertical runs to a maximum length of 9 metres
2. Installations can have a maximum of three 90° bends.
3. For any installation over 1.5 metres in height, a condensate tube must be installed

Continuous Flow Technical Information

Flow Rate Characteristics

In response to market trends and as part of our continuous improvement processes, Rinnai have developed new technologies and are introducing a number of modifications that allow our continuous flow models to operate over a wider range of conditions. Collectively known as “Enhanced Combustion Technology” (ECT), these new lower minimum gas rate and flow rates, offer improvements that deliver tangible benefits to our domestic continuous flow customers.

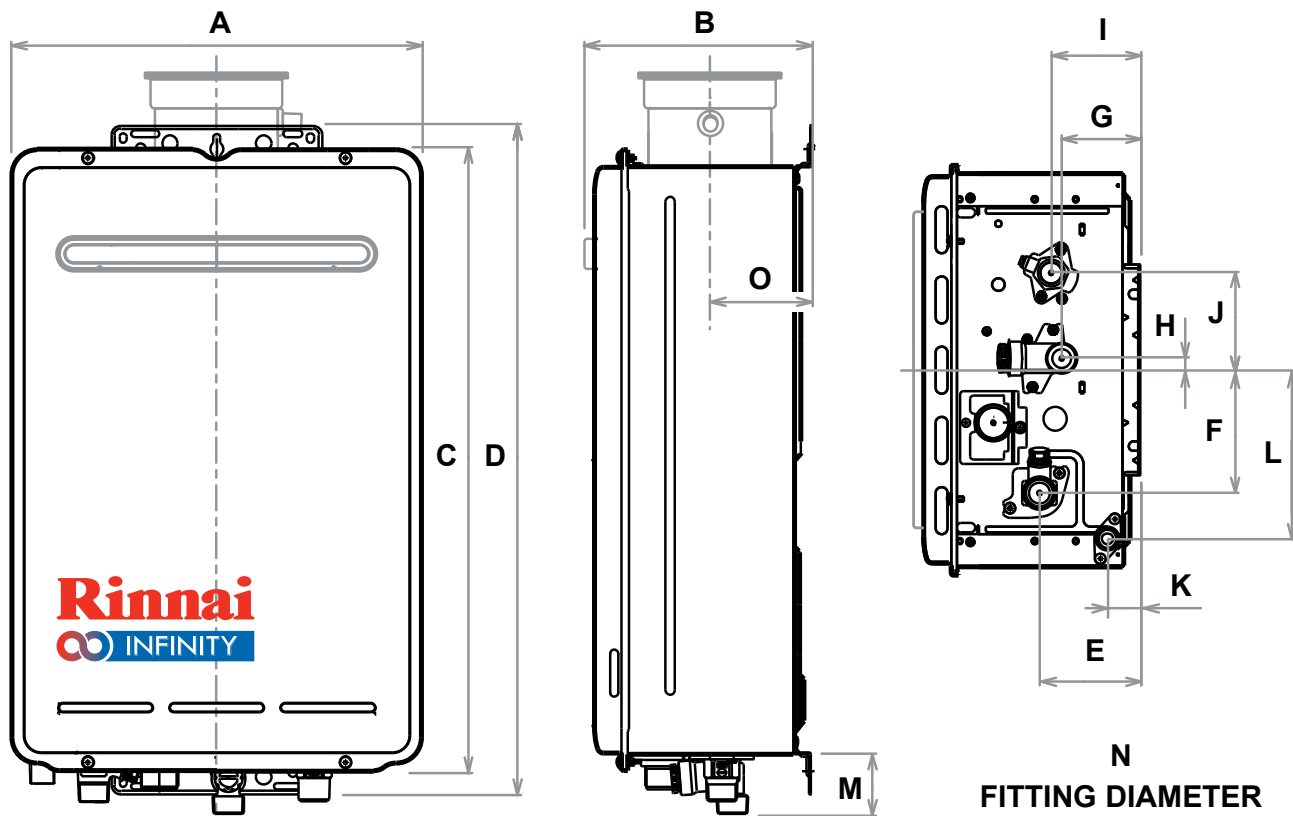
Our core Rinnai INFINITY Continuous Flow products have the lowest minimum gas rates on the market. This means that at our lowest possible burner settings the following two enhanced features are realised:

- a) They operate at lower flow rates which makes them more compatible with 3 star (7.5-9.0 l/min) low flow water saving fixtures
- b) They can operate at far higher ambient incoming water temperatures. This is particularly of benefit to the northern States of Australia and some inland areas where the water temperature from the ground can be as high as 30°C

Many Rinnai Continuous Flow models have variable flow rates that can exceed the commonly known flow rate. i.e. a Rinnai INFINITY 20 can actually give a maximum flow rate of 24 litres per minutes with a temperature rise of only 20°C. Ambient water temperatures vary immensely throughout Australia and often higher flow rates can be achieved with our models. This is most common when in use with Water Controllers set at showering temperatures between 39 and 42°C.

HANDY HINT

Cold Water (Ambient Temperature) + Temperature Rise = Outlet Temperature



Continuous Flow Specifications

Model		INF16	B16	S20	INF20	B20	B24	S26	INF26	INF26 SS	INF26 Plus	HD200e	INF26i S26i	HD200i	ENVIRO 26	ENVIRO 32	INF32	HD250e		
Factory Pre-Set Temps	°C	50 60	50 60	70	50 60	50 60	50 60	70	50 60	50	60	50 75	50 60*	50 75	60	60	50 60	50 75		
Colour (W=White, D=Dune M=Metallic, T=Titanium)		W	D	D	W	D	D	D	W	W	M	T	W	T	M	M	W	T		
Min Water Pressure (kPa) Max 1000 (kPa)		120	120	120	160	160	140	160	200	200	190	190	140	140	250	250	190	190		
Gas Rate	NG	Min	10.9	10.9	10.9	13.8	13.8	13.8	13.8	13.8	13.8	13.8	15.7	16	16	10	10	21	21	
		Max	125	125	125	160	160	188	188	199	199	199	199	199	195	195	172	211	250	250
	LPG	Min	11.3	11.3	11.3	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7	15.7	16	16	10.9	10.9	21	21
		Max	125	125	125	160	160	188	188	199	199	199	199	199	195	195	172	211	250	250
Flow Rate (L/Min)	25°C Rise		16	16	16	20	20	24	24	26	26	26	26	26	26	32	32	32	32	
	20°C Rise		20	20	20	24	24	26	26	26	26	30	32	32	32	35	37	37	37	
Star Rating		5.5	5.5	N/A	5.6	5.6	5.0	N/A	5.1	5.1	5.2	5.2	5.0	5.0	7.0	6.8	5.3	5.3		
Width	A	350	350	350	350	350	350	350	350	470	355	350	350	350	470	470	470	470		
Depth	B	194	194	194	194	194	194	194	194	239	202	251	234 ~ 274		283	283	244	244		
Height	C	530	530	530	530	530	530	530	530	600	503	600	600	600	670	670	600	600		
Height Inc Brackets	D	571	571	571	571	571	571	571	571	644	571	636	641	641	722	722	644	644		
Hot Water Outlet From Wall	E	87	87	87	87	87	87	87	87	83	87	96	91 ~ 131		115	115	115	115		
Hot Water Outlet From Centre	F	105	105	105	105	105	105	105	105	47	105	110	110	110	100	100	61	61		
Cold Water inlet From Wall	G	68	68	68	68	68	68	68	68	119	68	75	70 ~ 110		75	80	99	99		
Cold Water inlet From Centre	H	10	10	10	10	10	10	10	10	49	10	27	27	27	13	28	52	52		
Gas Connection From Wall	I	77	77	77	77	77	77	77	77	79	77	104	99 ~ 139		104	104	61	61		
Gas Connection Line From Centre	J	83	83	83	83	83	83	83	83	142	83	89	89	89	103	103	110	110		
Condensate/Return Line From Wall	K									108					138	138				
Condensate/Return Line From Centre	L									166					195	195				
Gas Connection Length From Base		40	40	40	40	40	40	40	40	40	40	41	41	41	40	40	41	41		
Cold Connection Length From Base	M	50	50	50	50	50	50	50	50	50	50	51	51	51	50	50	51	51		
Hot Connection Length From Base		39	39	39	39	39	39	42	42	42	42	42	42	42	41	41	42	42		
Gas Ø		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Cold Ø	N	15	15	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Hot Ø		15	15	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Condensate/Return Ø										20					15	15				
Flue Spigot Centre from Wall	O												195-135							

* S26i preset to 70°C for Solar boosting

Continuous Flow Accessories

Rinnai offer a comprehensive range of accessories that assist with the installation of Continuous Flow models.

Recess Boxes

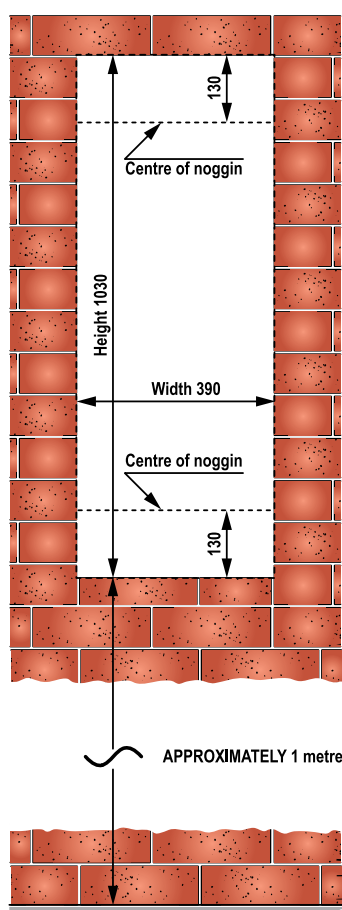
When installing a Rinnai Continuous Flow unit in a new home or renovation, you should consider using a recess box. These boxes allow you to virtually hide the hot water system into the cavity enabling a smooth and neat finish to the job. All are available in full and semi-recessed options.

There are 3 types of recess boxes:

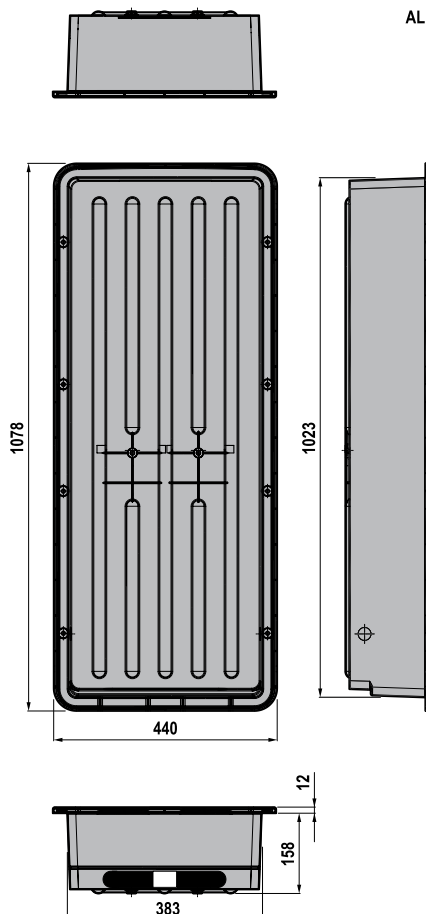
1. Smartbox® – suits all external Continuous Flow units except the larger INF32, Envirosmart & Commercial models
2. RBOX02 – suits INF32, HD200e & HD250e
3. RBOX05 - suits Enviro 26 & 32

Smartbox®

- Ideal for new homes or major renovations
- Save precious space by utilising the existing wall cavity
- Made from durable ABS plastic
- Suits any application:
- Brick: compatible for use with brick ties
- Rendered: complete with off-set spacers
- Weatherboard: used with semi-recess frame
- Full or semi recess options available
- Supplied standard in neutral DUNE colour – UV stabilised
- Fully paintable to blend with any colour scheme
- Not suitable for the INFINITY 32, Commercial units or Enviro models

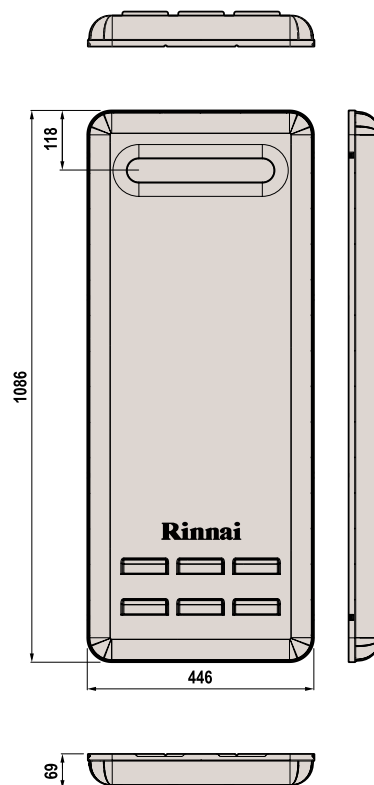


OPENING



Smartbox INSERT (SBOX1)

ALL MEASUREMENTS ARE IN MM UNLESS OTHERWISE STATED



Smartbox COVER (SBOXC)

RBOX02 & RBOX05 (Galvanised Recess Boxes)

The RBOX02 recess Box is for use with the larger INFINITY 32, HD200e & HD250e Continuous Flow water heaters and is suitable for brick constructions only. The RBOX05 is suitable for the INFINITY 26 Enviro and the INFINITY 32 Enviro.

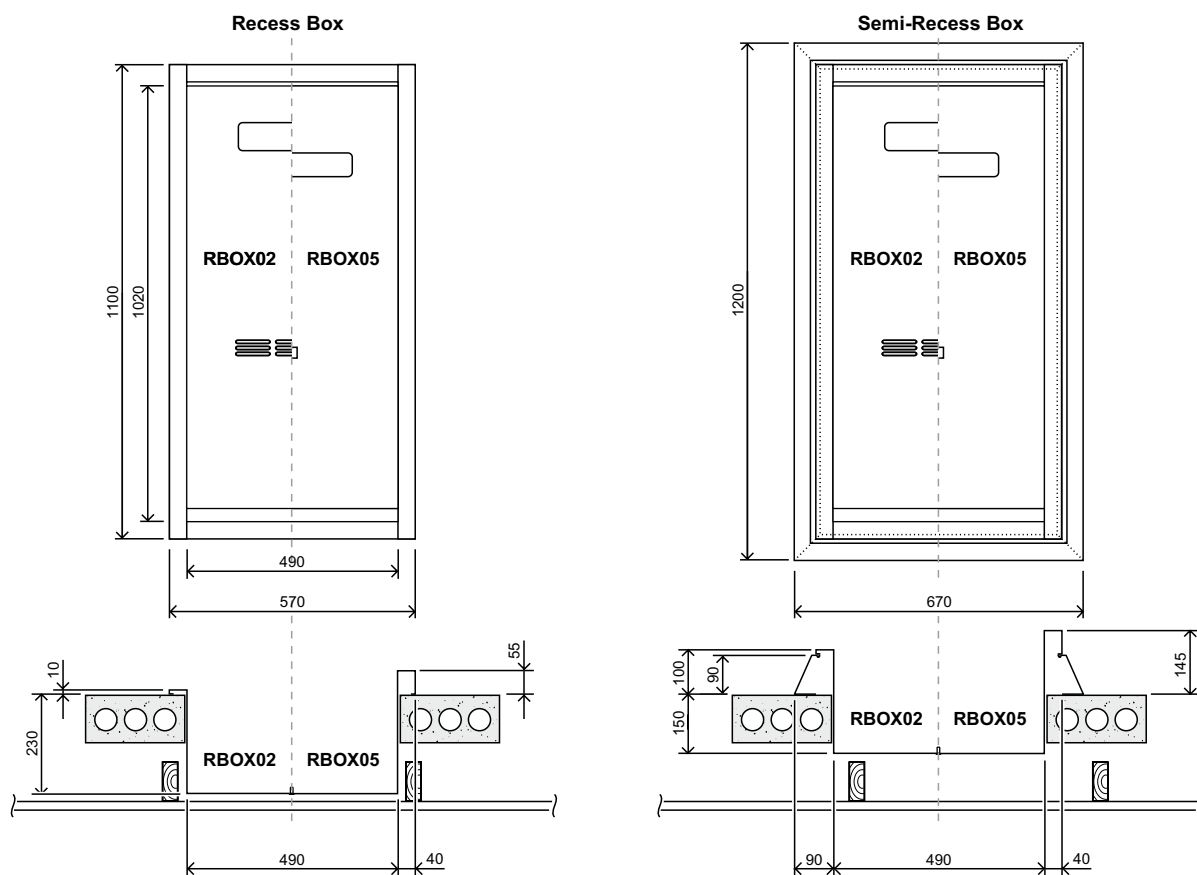
Recess Boxes are usually installed as follows;

New Homes or Extensions

- As the brickwork is being laid
- Usually installed before the plumbing rough-in
- Secured by fold-out brick ties incorporated in the box

Existing installations

- By cutting an opening in the brickwork
- Strengthening with a lintel as necessary
- Secured by drilling holes in the sides and fix in position with suitable flush headed masonry anchors



Model	Suits	Material	Opening Dimensions (mm)			Wall Protrusion (mm)	Recess	Code
			Width	Height	Depth			
Smartbox	INFINITY 16, 20 & 26, 26Plus B16, B20 & B24 Solar S20 & S26	ABS Plastic	385-395	1025-1050	160	55	Full	SBOX
					95	125	Semi	SBOXF*
RBOX02	INFINITY 32 INFINITY 26 Smartstart Commercial HD200e Commercial HD250e	Galv. Steel	495-530	1020-1050	230	10	Full	RBOX02
					140	100	Semi	RBOX02F*
RBOX05	INFINITY Enviro 26 & 32	Galv. Steel	495-530	1020-1050	230	55	Full	RBOX05
					140	145	Semi	RBOX02F*

* Ordered in addition to the full Recess Box

Rinnai INFINITY 26 Smartstart®

Introducing Australia's first dedicated 26 litre 'water saving' hot water system. Utilising Rinnai patented technology, the Smartstart® was developed specifically to reduce water wastage whenever a hot tap is turned on.

- Allows user to pre-heat the water in the pipes before the tap is turned on
- Simply activated by the 'preheat' button on any Rinnai Water Controller
- Takes a minute or two to warm up depending on the size of the installation
- Saves literally tens of thousands of litres of water over the life of the hot water system

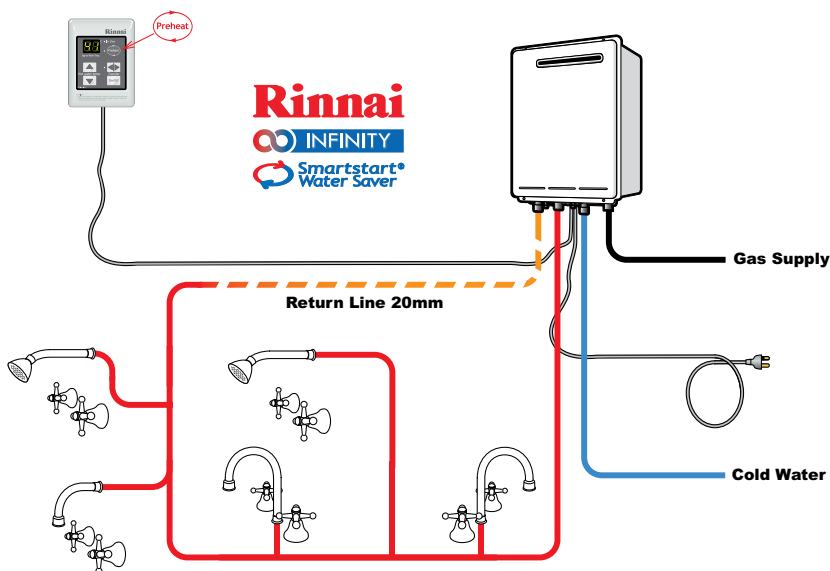
Plumbing is designed as a 'ring-main' or flow and return loop around the house. In existing homes, a return line can be plumbed in from the furthest point back to the Rinnai Continuous Flow unit.

Operation overview

The Smartstart® system heats the water in the pipework water connected between the water heater and the hot water outlets before any outlets are opened using the 'flow and return' pipework principle. This results in water savings and reduced waiting time for heated water delivery from the outlet when opened.

Traditional 'flow and return' systems usually keep the water in the pipework heated continuously. The Smartstart® system however, automatically shuts off after one pass of the ring main. This results in significant energy savings because water is not heated unnecessarily whilst retaining the benefits of traditional flow and return systems.

The Rinnai INFINITY 26 Smartstart® is a fully integrated unit with the pump and sensors built into the box. Also available is the separate Smartstart® box which is compatible with all Rinnai continuous flow models including Solar Boosters®.



Note: Maximum length of loop is 60 metres. Return line must be 20mm

HANDY HINT

It is always advisable to plum the loop towards the kitchen tap first if at all possible. This reduces waiting time at this high use outlet.



* A separate activation switch is required as Solar units are not compatible with Water Controllers.

Pipe Covers

Pipe Covers can be easily attached to most Rinnai Continuous Flow Hot Water units to:

- Cover the pipes, valves and even the external power point
- Provides a clean and smooth finish to the installation
- Two pipe covers can be joined together to hide longer pipe work under the unit as required

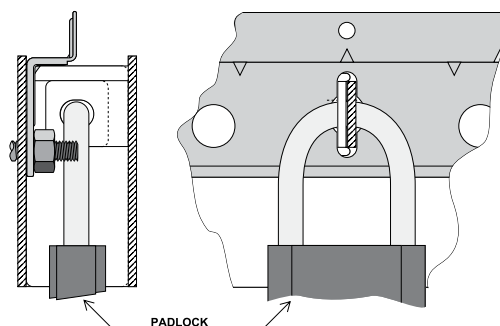
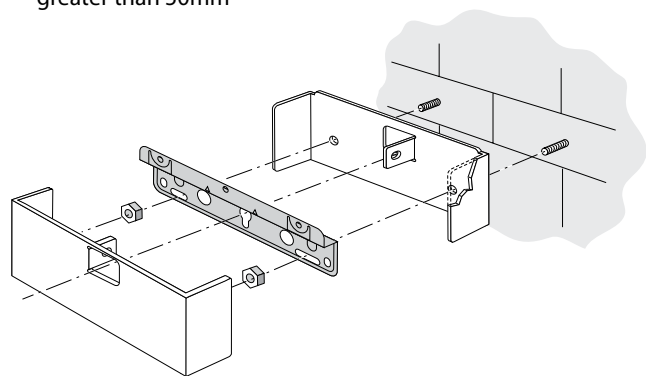
Suits	Width	Height	Depth	Colour	Code
INFINITY 26Plus	350mm	450mm	180mm	Star Metallic	PCD01
INFINITY 16, 20 & 26	350mm	400mm	160mm	Euro White	PC11
INFINITY 26 Smartsart & 32	470mm	400mm	210mm	Euro White	PCV02
B16, B20 & B24	350mm	450mm	210mm	Dune	PC11D
INFINITY Enviro 26 & 32	466mm	450mm	274mm	Star Metallic	PCD07



Security Bracket

Secure your investment with Rinnai's quick and easy to install security bracket.

- Assists in the protection of any Rinnai Continuous Flow model from theft if it is located in an exposed area
- Particularly applicable to new homes during the building process
- The bracket fits over the unit wall mounting bracket covering the holes where the unit is secured to the wall
- A standard padlock and key is required (purchased separately)
- Padlock shank diameter not to exceed 6mm with an overall length greater than 50mm



Sideways Flue Diverter

Where confined or narrow spaces might normally exclude a Rinnai Continuous Flow water heater from being installed, our sideways flue diverter is available. Manufactured from durable stainless steel, the sideways flue diverter forces the flue gases sideways. This can help overcome many of the restrictions when the hot water system is installed on balconies with only one opening.

Note: Suits B24, S26, INFINITY26, INFINITY26Plus, INFINITY 26 Smartstart® and HD200 models only.

Conditions & Clearances

Full installation instructions are contained when purchasing the product however, there are a number of important conditions and clearances for the location of the Rinnai Continuous Flow unit installed with a Flue Diverter.

Please contact the Rinnai HelpLine on 1300 555 545 for further information



Rinnai Solar Hot Water Systems

Range at a glance

Close Coupled Systems

Where the Storage Cylinder and the Solar Collectors (panels) are coupled together and the installation is on the roof. A choice of an electric boost element in the cylinder or a gas booster installed usually on the side of the house completes the system.

Benefits:

- Technically very efficient, economical to install and low maintenance
- No recirculating pumps and pipe runs – reducing heat losses and improving running efficiencies
- No electricity required to operate pumps to recirculate the water through the collectors
- Space saving in that it eliminates the need for a storage tank at ground level – ideal for courtyard homes or small blocks
- Supplied standard in Titanium colour
- Wide range of Colorbond® colours available. Ask your Rinnai Solar consultant for selection



Split Systems

Where the Storage Cylinder and the Solar Collectors are literally split and installed separately. A choice of an electric boost element in the cylinder or an in-line gas booster which can be installed on the side of the cylinder, or remote mounted on a wall.

Benefits:

- Easy installation on roofs
- Streamlined appearance - minimal impact on the aesthetics of your roof line with only the Collectors visible
- Split Systems do not require reinforcement of the roof structure, as the weight associated with water storage is at ground level
- Split System cylinder can be installed internally or externally
- Collectors and the tank do not need to be installed at the same time – ideal during construction of new homes and major renovations



What is the Booster?

The booster is simply a backstop to make sure you always have hot water available, such as during cloudy or rainy weather or during the winter months. It also operates should you exhaust the stored water on those occasions when an extra family stays for a weekend!

Electric Boost

- Bottom element cylinders connected to off peak receive the most solar energy when hot water is used in the morning. Solar energy reheats the water and is topped up overnight by the electric booster if required
- Continuous tariff suits bottom element tanks where water is used all day and both solar and electric energy reheat the water
- Mid element tanks are offered in Prestige 250 and 315 split systems and operate like a close coupled solar water heater where solar heats the lower part of the cylinder and electric boost (continuous or off peak) maintain full tank temperature

Gas Boost

- The in-line gas booster detects the temperature of the solar pre-heated water from the cylinder. Gas boosting automatically operates, only when necessary to maintain full delivery temperature
- Regardless of whether your hot water is used in the mornings or evenings, gas boosting is the most efficient, convenient and cost effective boost option

Gas boosters operate only on demand and have the additional benefit of never running out of hot water



**HANDY
HINT**

**NEW 26i Internal Model
also available**

The Rinnai Solar Hot Water Systems are separated into 2 ranges:

Rinnai Prestige

- Highest quality Stainless Steel cylinders
- Supplied with high efficiency Excelsior Solar Collectors
- Available in both Close Coupled and Split Systems
- Available in both Gas or Electric Boost

Storage Cylinders

- Long lasting commercial grade Stainless Steel construction
- Specifically designed for solar ensuring maximum heat retention
- Do not require a sacrificial anode saving on maintenance costs

Excelsior Solar Collectors

- Highly efficient all copper Collector with a selective surface maximising energy from the sun
- Full aluminium casing for corrosion resistance
- Fully replaceable glass
- Available in both standard and frost tolerant versions (see below)

Rinnai Sunmaster

- High quality Vitreous Enamel lined steel cylinders
- Supplied with high efficiency Enduro or Equinox (FTC) Collectors
- Available as Split Systems only in both gas or electric boost

Modular System

- Components supplied separately allowing you to select your own system
- Collectors and cylinder can be installed at separate times which is ideal for working around construction timetable

Storage Cylinders

- Cost effective glass lined (Vitreous Enamel) tanks
- Tall slimline design with a smaller footprint for minimal aesthetic impact

Enduro & Equinox Solar Collectors

- Highly efficient aluminium fin solar absorber to maximise efficiency
- 8 Riser tubes per collector for effective transfer of solar energy to the water
- Full aluminium casing for corrosion resistance
- Equinox Collector has added feature of Frost Protection (see below)



Frost Protection

If you live in a frost prone area, it is important that you specify suitable solar collectors. In VIC, NSW and ACT for example, it is mandatory to install FTCs/E-Frost in certain areas as determined by listed post codes. For further information, please talk to your solar specialist or refer to the full warranty conditions on-line at www.rinnai.com.au

Standard Collectors

Excelsior and Enduro are not warranted for any damage due to freezing or frost

FTC Collectors

Excelsior FTC and Equinox are warranted to -6°C except in VIC, NSW and ACT where warranty is determined by postcode.

E-Frost Collectors

E-Frost is warranted to -12°C except in VIC, NSW and ACT where warranty is determined by postcode.

NOTE: In Alpine areas such as Bogong, Falls Creek Mount Buffalo, Mount Buller, Mount Hotham, Mt Baw Baw, Lake Mountain, Charlotte Pass, Mt Selwyn, Mt Kosciusko, Perisher Blue and Thredbo, there is no warranty for damage caused by frost, freezing or snow cover for any Rinnai Solar Collector.

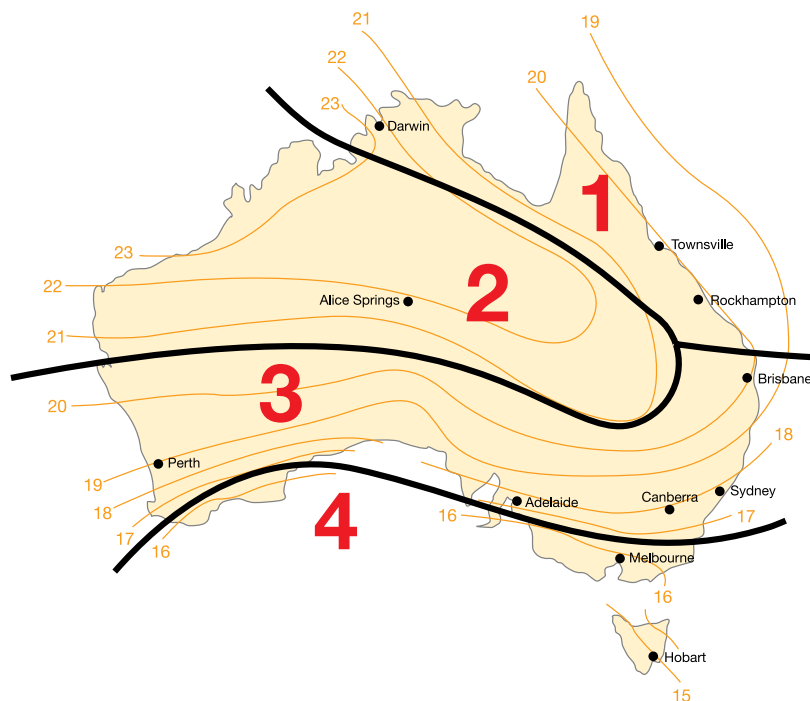
Solar Rebates

Government Rebates

The Australian Greenhouse Office awards Renewable Energy Certificates (RECs) according to how much energy each Rinnai Solar system saves compared with a conventional electric water heater. The Federal Government legislation states that RECs are applicable when a solar system is installed in a new home or replaces an existing hot water system.

Solar Zones

The number of RECs awarded to a particular Rinnai Solar System varies according to the amount of energy saved relative to an electric water heater installed in the same location. This is influenced by the amount of local solar gain and the local operating conditions. Darwin, for example, has more solar gain than Hobart, hence a particular system installed in Darwin will be assigned a higher number of RECs than if it were installed in Hobart. For the purposes of REC assessment, Australia is divided into 4 solar zones as shown in the map.



HANDY HINT

To assist with calculating the rebates available, Rinnai has an on-line Rebate estimator with the latest rebates and values.

See www.rinnai.com.au



HANDY HINT

It is if you are unsure where the boundaries lie between zones, Please refer to the Australian Government website www.orer.gov.au and follow the Solar Water Heater link to find a post code listing.

How to claim the RECs rebate?

Ultimately the RECs awarded to any system are traded/sold on the open market at a price which fluctuates according to supply and demand. The simplest way is to fill out the REC rebate declaration form that is supplied with each system which transfers the RECs to Rinnai. In return we will pay you the market rate which is current at that time less a small admin fee. Alternatively, you can speculate on the market value and sell them at a later stage either to us or another authorised trader.

Additional Rebates/Incentives

From time to time both the Federal and State Governments as well as some local councils offer rebates (additional to RECs) as an incentive to install Solar Hot Water systems. These are often conditional and must always be checked before purchase.

Conditions for additional rebates sometimes include:

- Conversions from Electric Systems to Solar Systems
- Gas Boosted systems only
- Regional/Rural areas only
- Concession Card holders
- Minimum RECs contribution (eg minimum 20 RECs)
- Residency restrictions
- Domestic applications only

RECs and Rinnai Solar Systems

The following tables show the awarded RECs for a selection of the most popular systems that Rinnai sell. If your particular system is not shown, please contact Rinnai on 1300 555 545 or simply refer to the on-line Rebate Estimator which has the ability to custom build a system.

Rinnai Prestige				RECs Zones Excelsior & Excelsior FTC Collectors				RECs Zones E-Frost Collectors				
Description	Size	Booster	Collectors	1	2	3	4	1	2	3	4	
Split System Gas	System B	250L	S20	2	42	44	42	36	37	39	37	31
	System C	250L	S26	2	42	44	42	36	37	39	37	31
	System D	315L	S26	2	42	44	42	36	37	39	37	30
	System E	315L	S26	3	49	48	49	43	44	44	44	37
Split System Electric	System F	250L	3.6kW	2	32	31	32	26	30	29	30	25 ⁽¹⁾
	System G	315L	3.6kW	2	32	31	32	26	29	29	29	24 ⁽¹⁾
	System H	315L	3.6kW	3	35	33	35	30	33	32	33	29
Close Coupled Electric	System I	180L	3.6kW	1	21	21	21	17 ⁽¹⁾⁽²⁾	Not available for use with Close Coupled Systems			
	System J	330L	2.4kW	2	35	33	35	30				
	System K	330L	3.6kW	2	35	33	35	30				
Close Coupled Gas	System L	180L	S20	1	29	29	29	24				
	System M	330L	S26	2	43	45	43	37				

Rinnai Sunmaster				RECs Zones Enduro & Equinox Collectors				RECs Zones E-Frost Collectors				
Description	Size	Booster	Collectors	1	2	3	4	1	2	3	4	
Split System Gas	System 1	175L	S20	1	28	28	28	23	23	23	23	19 ⁽²⁾
	System 2	175L	S26	1	28	28	28	23	23	23	23	19 ⁽²⁾
	System 3	215L	S20	2	42	44	42	36	36	38	36	30
	System 4	215L	S26	2	42	44	42	36	36	38	36	30
	System 5	270L	S26	2	43	44	43	36	36	38	36	30
Split System Electric	System 6	200L	3.6kW	2	20	20	20	16 ⁽¹⁾⁽²⁾	20	20	20	16 ⁽¹⁾⁽²⁾
	System 7	315L	3.6kW	2	30	30	30	25 ⁽¹⁾	28	29	28	22 ⁽¹⁾
	System 8	315L	3.6kW	3	33	33	33	28	32	32	32	27

⁽¹⁾ Not suitable for Victorian 5 Star Homes (3 or more bedroom criteria) ⁽²⁾ Not eligible for Federal Government Electric to Solar rebate scheme

How much can I get?

As can be seen from the above table, Rinnai Solar Systems are typically awarded between 20 to 42 RECs. Each REC has a \$ value that fluctuates according to market demand, which needs to be checked at the time of purchase. If a REC was valued at (say) \$37, your rebate for Rinnai systems would be anywhere between \$740 and \$1554.

At the time of printing this brochure, the Federal Government is also offering an additional \$1000 to switch from an electric system to Solar. In some States there are additional rebates on top of this again!

Correct Sizing

Correct Sizing is vital for optimum performance

Number of Occupants

The number of users in any installation is extremely important as it directly affects the size of unit that is required. Nobody likes a cold shower so it is vital that any system is correctly sized for an application. Please talk to your Rinnai Hot Water Specialist about the best model to suit your needs.

Below we have outlined some of the considerations for various Rinnai Solar Systems:

Gas Boosted Solar

- Sizing parameter – Number of bedrooms in the home
- The storage cylinder capacity determines the volume of available solar heated hot water (Choice of 20 or 26 litres)
- The Gas Booster is always available as a backup, therefore hot water will never run out
- Undersized system could mean the system is relying on the gas booster more often – increasing running costs
- Insufficient Solar Collectors would also reduce the solar gain causing reliance on the gas booster

Electric Boosted Solar

- Sizing Parameter – Number of Bedrooms in the home
- The Storage Cylinder size determines the amount of hot water available regardless of whether solar generated or electric boosted
- Hot water can run out if not correctly sized
- Choice of electricity tariff affects availability of re-heated water:
 - Normal (peak) tariff continually re-heats
 - Off-peak will generally not re-heat until overnight
- Prestige offers mid element cylinders to balance the solar and electric boost used



Tips on selecting the best Rinnai System

To correctly select a Rinnai Solar System for a home, a number of lifestyle factors need to be considered.

1. What Solar Zone is applicable for the installation?

This determines the amount of solar energy that will be available and can influence the number of collectors that should be installed.

2. Is Gas available?

Natural Gas boosting is the cheapest to run and the most environmentally friendly form of boosting for a Solar System. Rinnai recommends that gas boosting should always be the first choice if available. Alternatively, both LPG & Electric boosting are also economical to run with correctly sized systems.

3. Is there limited space available?

This can determine whether space is available at ground level for a Split System storage cylinder. If limited, then a Close Coupled roof mounted system would be the most appropriate.

4. Is the area prone to frost or sub-zero temperatures?

If you live in a frost prone area, it is important that you specify suitable solar collectors. In VIC, NSW and ACT for example, it is mandatory to install FTCs/E-Frost in certain areas as determined by listed post codes. For further information, please talk to your solar specialist or refer to the full warranty conditions on-line at www.rinnai.com.au

Rinnai Solar System Sizing Tables

Vitreous Enamel Split Systems - Gas						
Solar Zone(s)	Number of Bedrooms	System Performance	Tank Storage Capacity (Litres)	No of Solar Collectors	Booster Size	Rinnai Sunmaster System
1, 2 & 3	1 to 3	Good	175	1	S20	1
		Best			S26	2
	2 to 3	Good	175	1	S26	2
		Best	215	2	S20	3
	3 to 4	Good	215	2	S20	3
		Best			S26	4
3+	Good	215	2	S26	4	
	Best	270			5	
4	1 to 3	Good	175	1	S26	2
		Best	215	2	S20	3
	2 to 3	Good	215	2	S20	3
		Best			S26	4
	3 to 4	Good	215	2	S26	4
		Best	270			5
	3+	Best	270	2	S26	5

Vitreous Enamel Split Systems - Electric					
Solar Zone(s)	Number of Bedrooms	Tank Storage Capacity (Litres)	No of Solar Collectors	Booster Size	Rinnai Sunmaster System
1, 2 & 3	1 to 3	200	2	3.6	6
	3 to 4	315	2	3.6	7
	3+	315	3	3.6	8
4	1 to 2	200	2	3.6	6
	2 to 3	315	2	3.6	7
	3+	315	3	3.6	8

Stainless Steel Split Systems - Gas						
Solar Zone(s)	Number of Bedrooms	System Performance	Tank Storage Capacity (Litres)	No of Solar Collectors	Booster Size	Rinnai Prestige System
1, 2 & 3	1 to 3	Best	250	2	S20	B
		Good			S20	B
	2 to 3	Best	250	2	S26	C
		Good	250		S26	C
	3 to 4	Best	315	2	S26	D
		Good	315			D
3+	Best	315	2	S26	E	
	Good	315	3		E	
4	1 to 3	Good	250	2	S20	B
		Best			S26	C
	2 to 3	Good	250	2	S26	C
		Best	315			D
	3+	Good	315	2	S26	D
		Best		3		E

Stainless Steel Split Systems - Electric					
Solar Zone(s)	Number of Bedrooms	Tank Storage Capacity (Litres)	No of Solar Collectors	Booster Size	Rinnai Prestige System
1, 2 & 3	1 to 3	250	2	3.6kW	F
	3 to 4	315	2	3.6kW	G
	3+	315	3	3.6kW	H
4	1 to 2	250	2	3.6kW	F
	2 to 3	315	2	3.6kW	G
	3+	315	3	3.6kW	H

Stainless Steel Close Coupled - Gas					
Solar Zone(s)	Number of Bedrooms	Tank Storage Capacity (Litres)	No of Solar Collectors	Booster Size	Rinnai Prestige System
1, 2 & 3	1 to 3	180	1	S20	L
	3+	330	2	S26	M
4	1 to 2	180	1	S20	L
	2 to 4	330	2	S26	M

Stainless Steel Close Coupled - Electric					
Solar Zone(s)	Number of Bedrooms	Tank Storage Capacity (Litres)	No of Solar Collectors	Booster Size	Rinnai Prestige System
1, 2 & 3	1 to 3	180	1	3.6kW	I
	3 to 4	330	2	2.4kW	J
	3+	330	2	3.6kW	K
4	1 to 2	180	1	3.6kW	I
	2 to 3	330	2	2.4kW	J
	3+	330	2	3.6kW	K

Ordering Sunmaster Solar

Rinnai Sunmaster Solar systems are ordered as separate components as shown in the below table. This is particularly suitable for installation in new homes and major renovations as it allows for supply of the various components at different stages of completion. Alternatively, all components can be ordered for a single delivery for existing homes & replacements.

Gas	System 1		System 2		System 3		System 4		System 5	
	Gas 175L, S20 1 Collector		Gas 175L, S26 1 Collectors		Gas 215L, S20 2 Collectors		Gas 215L, S26 2 Collectors		Gas 270L, S26 2 Collectors	
Components	Order Code	Qty	Order Code	Qty	Order Code	Qty	Order Code	Qty	Order Code	Qty
Storage Cylinder	SG175	1	SG175	1	SG215	1	SG215	1	SG270	1
Solar Collectors (Std)	R18801740*	1	R18801740*	1	R18801740*	2	R18801740*	2	R18801740*	2
Collector Installation Kit	R33202739	1	R33202739	1	R33202740	1	R33202740	1	R33202740	1
Pump Kit	SGPKIT2	1	SGPKIT2	1	SGPKIT2	1	SGPKIT2	1	SGPKIT3	1
Gas Booster	S20#	1	S26#	1	S20#	1	S26#	1	S26#	1

Electric	System 6		System 7		System 8	
	Electric 200L, 2 Collectors, 3.6kW		Electric 315L, 2 Collector, 3.6kW		Electric 315L, 3 Collector, 3.6kW	
Components	Order Code	Qty	Order Code	Qty	Order Code	Qty
Storage Cylinder	SE200S36	1	SE315S36	1	SE315S36	1
Solar Collectors (Std)	R18801740*	2	R18801740*	2	R18801740*	3
Collector Installation Kit	R33202740	1	R33202740	1	R33202741	1
Pump Kit	USKIT1	1	USKIT1	1	USKIT1	1

* Collector shown is standard Enduro (Non Frost Tolerant).

Please substitute the following codes for Frost Tolerant collectors:

Equinox Collector - R18801741
E-Frost Collector - 18801743

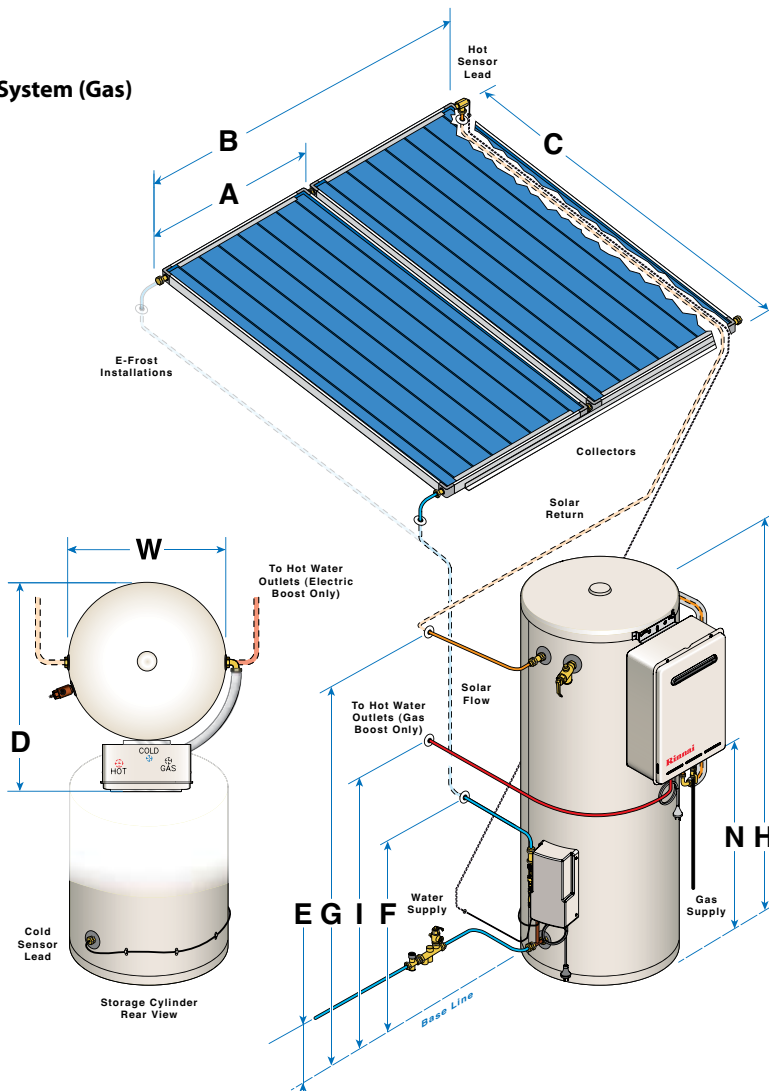
Nominate N (Natural Gas) or L (LPG) after the code to specify gas type

Solar Rough in Diagram

Sunmaster Split Systems

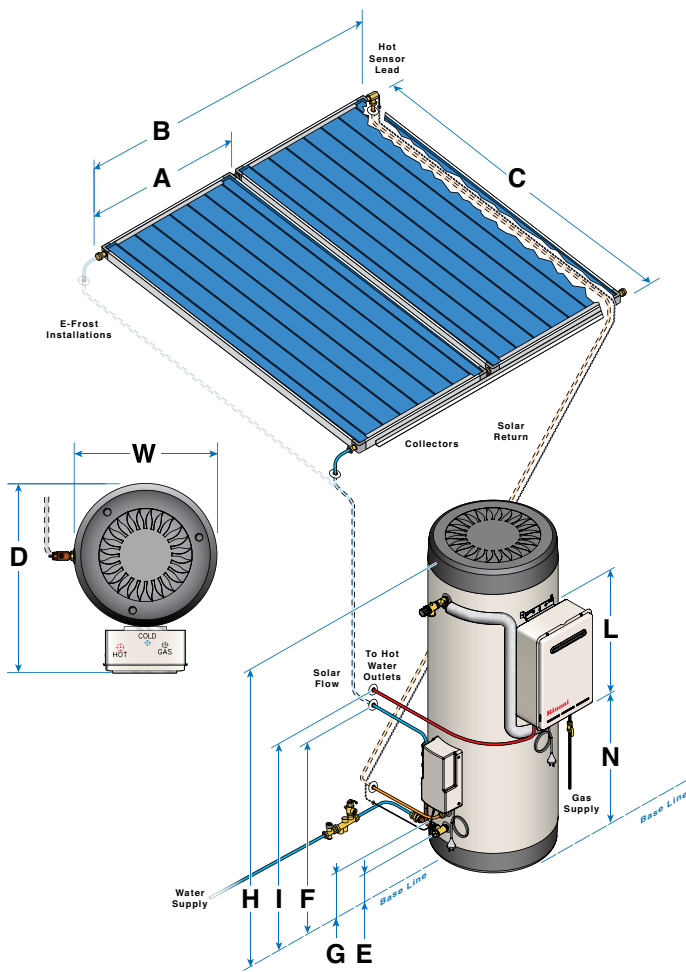
Sunmaster Split Systems- Enamel Tanks		175 Lt Gas Boost 160 Lt Electric Boost	215 Lt Gas Boost 200 Lt Electric Boost	270Lt Gas Boost	315Lt Electric Boost
A	Collector Width	1025	1025	1025	1025
B	Width of two Collectors	2100	2100	2100	2100
C	Length of Solar Collectors	1940	1940	1940	1940
H	Height of Cylinder	1530	1825	1265	1510
D	Depth of Cylinder with Booster	709*	709*	879	N/A
W	Cylinder Diameter	515	515	685	685
E	Left Hand Side Cold Water Inlet	150	150	210	260
F	Cold Water Flow to Collector	665	665	725	775
G/H	Hot Water Return from Collector	1310	1605	985	1200
I	Hot Out (Gas Boost)	885	1180	620	N/A
K	Hot Out (Electric Boost)	1310	1605	N/A	1200
L	Height of Gas Boost	530*	530*	530	N/A
M	Width of Gas Boost	350*	350*	350	N/A
N	Right Hand Side Gas Supply	960	1255	695	N/A

Sunmaster Split System (Gas)

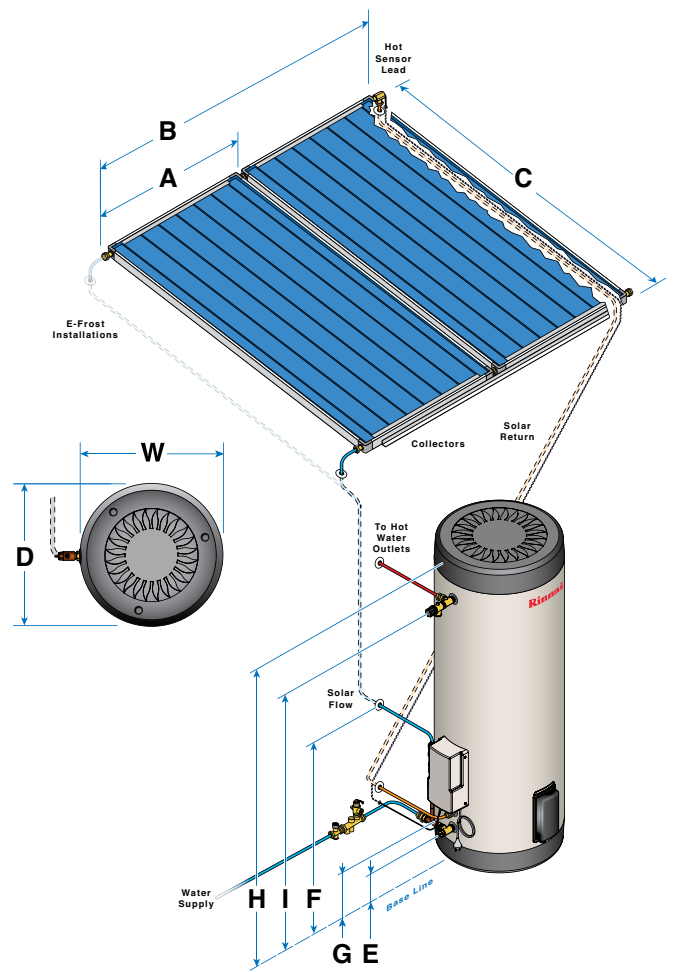


Prestige Split Systems

Split Systems Stainless Steel		Electric Boost			Gas Boost		
		160 Lt	250 Lt	315 Lt	160 Lt	250 Lt	315 Lt
A	Collector Width	1025			1025		
B	Width of two Collectors	2100			2100		
C	Length of Solar Collector	1940			1940		
-	Weight (Empty)	48	66	80	44	56	68
H	Height of Cylinder	1205	1700	2090	1170	1700	2090
D	Depth of Cylinder with Booster	N/A			795		
W	Cylinder Diameter	600			600		
E	Cold Water inlet	210			210		
F	Cold Water Flow to Collector	725			725		
G	Hot Water Return from Collector	300			300		
I	Hot Water Flow To House (From Gas Boost)	N/A			845	1235	
K	Hot out	995	1490	1880	N/A		
L	Height of Gas Boost	N/A			530		
M	Width of Gas Boost	N/A			350		
N	Right Hand Side Gas Supply	N/A			870	1260	



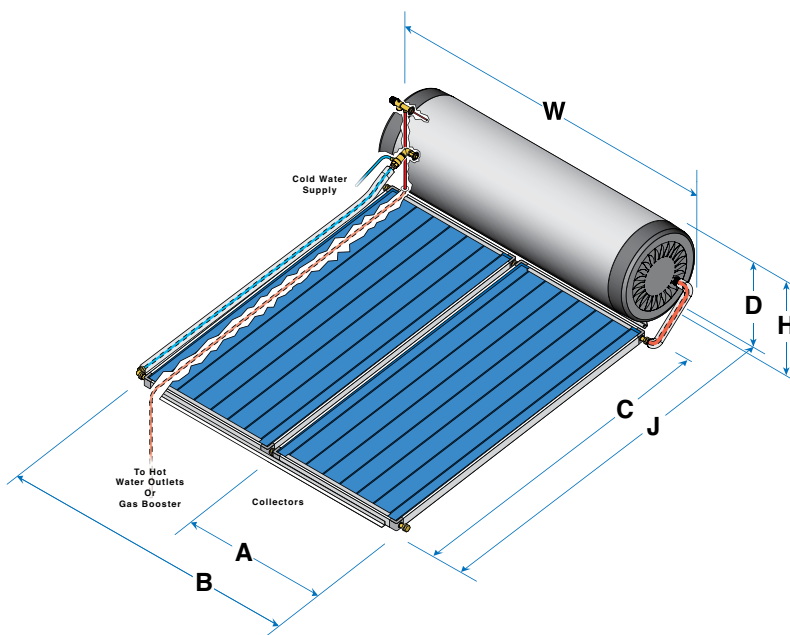
Prestige Split System (Gas)



Prestige Split System (Electric)

Prestige Close Coupled Systems

Close Coupled Stainless Steel		Gas & Electric	
		180 Lt	330 Lt
A	Collector Width	1025	
B	Width of two Collectors	2100	
C	Length of Solar Collector	1940	
J	Overall Length of System	2580	
-	Weight (Empty)	44	68
H	Height of Cylinder (installed)	640	
D	Diameter	600	
W	Cylinder Length / Width	1205	2090
E	Side Cold Water inlet	N/A	
F	Cold Water Flow to Collector	N/A	
G	Hot Water Return from Collector	N/A	
I	Hot Water Flow to House (From Gas Boost)	N/A	
K	Hot out (to Cold in Gas Boost)	N/A	
-	Height of Gas Boost	530	
-	Width of Gas Boost	350	
N	Right Hand Side Gas Supply	N/A	



Rinnai

Solar Collector Dimensions

Characteristics		Enduro	Equinox Frost Tolerant	Excelsior	Excelsior Frost Tolerant	E-Frost
Code		SP200A	SP200A FTC	EXT	EXT FTC	E-Frost
Type		Flat Plate				Flat Plate/Heat Pipe
Construction	Waterways	Copper				
	Absorber	Aluminium	Aluminium	Copper	Copper	Aluminium
	Selective Surfaces	High Performance				
Maximum Operating Pressure		850 kPa				
Casing Material		Aluminium				
Weight empty		33kg	36kg	35kg	38kg	35kg
Weight full		34.3kg	37.3kg	36.5kg	39.5kg	36kg
Volume of Water		1.3 litres	1.3 litres	1.5 litres	1.5 litres	1 litres
Potential Solar Output at PTR relief conditions		1.25kW	1.25kW	1.25kW	1.25kW	1.25kW
Approx Roof Space Required L X W (mm)	1 Collector	1940 x 1025	1940 x 1025	1964 x 1047	1964 x 1047	1940 x 1025
	2 Collector	1940 x 2100	1940 x 2100	1964 x 2144	1964 x 2144	1940 x 2100
	3 Collector	1940 x 3175	1940 x 3175	1664 x 3241	1664 x 3241	1940 x 3175

Electric Hot Water Systems

Range at a glance

Mains Pressure Systems

They are simply a storage cylinder that holds water at a pre-set temperature with the use of thermostatic control. As hot water is used, it is replaced with cold water and reheats again. Hot Water delivery is at mains pressure or the maximum allowable pressure should the home require a pressure limiting device installed.

Rinnai HOTFLO

Our quality HOTFLO range of electric tanks are available in various storage capacities ranging from a compact 40 Litre right up to the large 400 Litre model. We also have a complete range of element sizes minimising changeover costs.

- Economical Vitreous Enamel lined steel tank with a 5 year warranty
- Inbuilt anode protection - extends the life of the tank
- Dual handed - allows increased flexibility of installation
- Flexibility - suitable for internal and external use
- Foam Insulation exceeds MEPS* (Minimum Energy Performance Standard) by an average of 20%, reducing heat loss and running costs
- Thermostatically controlled with safety temperature shut off for added safety and peace of mind

* Excludes 40 litre



Gravity Feed Systems

Similar to normal storage cylinders the gravity feed systems again hold water at a pre-set temperature but this time not under mains pressure. Sometimes also referred to as 'constant pressure' systems, the Roofmaster is usually located in the roof space. Whereas mains pressure systems usually operate between 300 – 500kPa, a gravity feed system operates at the 'head of pressure' dependant on how high the tank is above the tap/shower. In single storey installations this is generally about 20 to 24kPa.

Rinnai Roofmaster

The Rinnai gravity feed Roofmaster water heaters are concealed in your roof space. The storage cylinder is made from heavy duty copper which makes it extremely reliable and corrosion resistant. The lower pressure at which they operate puts much less stress on the cylinder and fittings, so everything lasts that much longer.

- Copper cylinder construction - reliable and corrosion resistant with a 7 Year warranty
- Specifically designed for in-roof Installations
- Gravity feed, less stress on components means longer life
- Thermostatically controlled with silent operation
- Flexibility to integrate with solar and/or combustion stove (wetback) installations
- Operates at the 'head of pressure' 20 to 24 kPa



Range Overview

The table below outlines the sizes and element option for all Rinnai Electric Hot Water Systems

Range	HOTFLO							Roofmaster			
	40L	80L	125L	160L	200L	315L	400L	Plus	Prestige		Coil
Size	40L	80L	125L	160L	200L	315L	400L	250L	250L	315L	315L
Construction	Vitreous Enamel							Copper			
Element Size (kW)	2.4 or 3.6	2.4 or 3.6	2.4 or 3.6	2.4 or 3.6	3.6 or 4.8	2.4 or 3.6	2.4 or 3.6	3.0 Immersion Element			

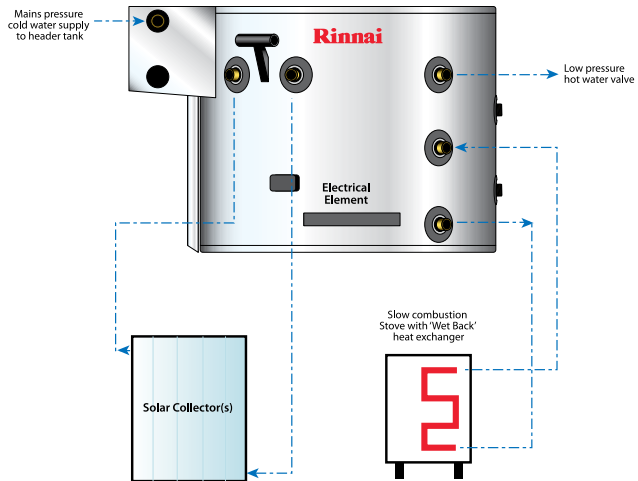
Solar Boosted Roofmaster

Roofmaster Prestige (Solar &/or Combustion Heater)

In this installation the primary heating source utilises energy from the sun via Solar Collectors and/or energy generated from a slow combustion stove with a 'wet back' heat exchanger.

The optional Electric element (Submerged 'Bobbin type') is then used only to boost water temperature in low pressure tank and is usually set up on an Off Peak tariff.

For Roofmaster specifications including dimensions, please refer to page 31.



Selecting the correct Electric system

Step 1 - Tariff

- Determine which tariff that is going to be used
- If using both Peak & Off-peak use the sizing guide for Off-peak

Step 2 - Climate

- Refer to the Climate Map on page 7 to reference whether the installation is in a warm or cool climate

Step 3 - Number of persons

- Determine the number of persons living in the home
- Also consider additional demand if it is a larger home with spare bedrooms

Tank Size	Peak Electric (Continuous Tariff)		Off-peak Electric	
	Warm Climate	Cool Climate	Warm Climate	Cool Climate
40 Litres	1	1	Not Recommended	Not Recommended
80 Litres	2 to 3	1 to 2	1 to 2	Not Recommended
125 Litres	3 to 4	2 to 3	2 to 3	1 to 2
160 Litres	4 to 5	3 to 4	3 to 4	2 to 3
200 Litres	6 to 7	4 to 5	4 to 5	3 to 4
250 Litres	7 to 8	5 to 6	5 to 6	4 to 5
315 Litres	8 to 9	6 to 7	6 to 7	5 to 6
400 Litres	10+	8+	8+	6+

HANDY HINT

Always err on the high side when sizing electric systems. Under sizing can result in a lack of hot water and very unhappy customers!

Electric Storage Recovery Times

The recovery times for all storage tanks is based on 3 factors:

1. The volume of water
2. The size of the electric element
3. The set temperature

The table below shows all available Rinnai sizes and assumes that the unit is wired for immediate reheat i.e. peak tariff. For Off-peak wired units, the table can only be used as a guide for how long it will take from the point that re-heating occurs.

Element size

- 1.2kW element heats
- 2.4kW element heats
- 3.6kW element heats
- 4.8kW element heats

Litres per hour heated by 50°C

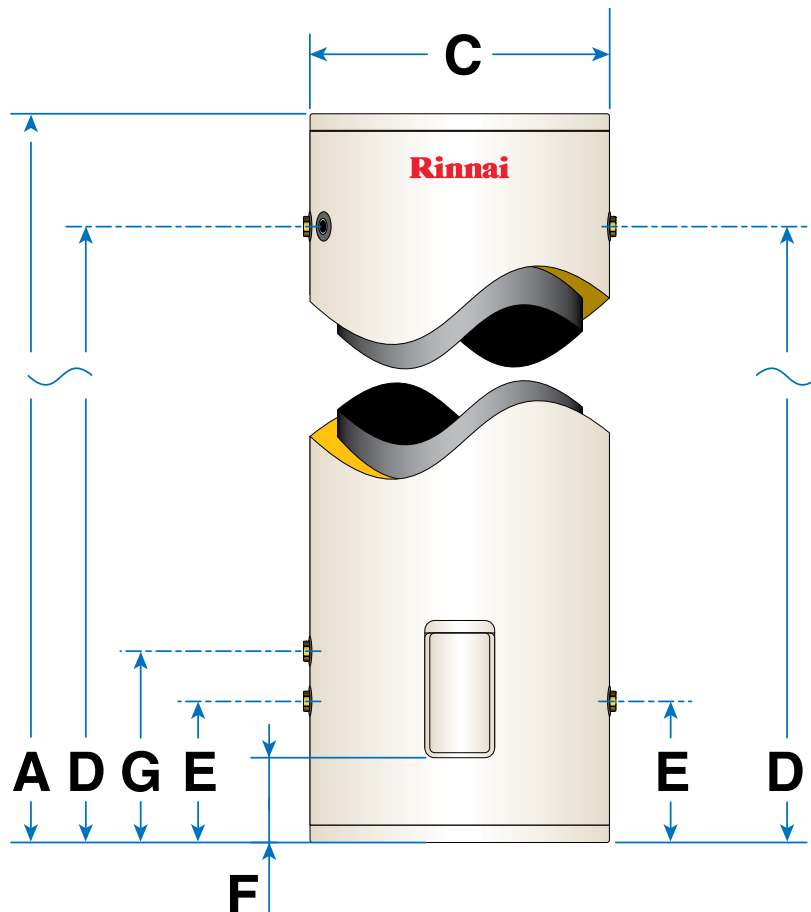
- 20.6 litres
- 41.2 litres
- 61.9 litres
- 82.5 litres

Specifications

HOTFLO Electric

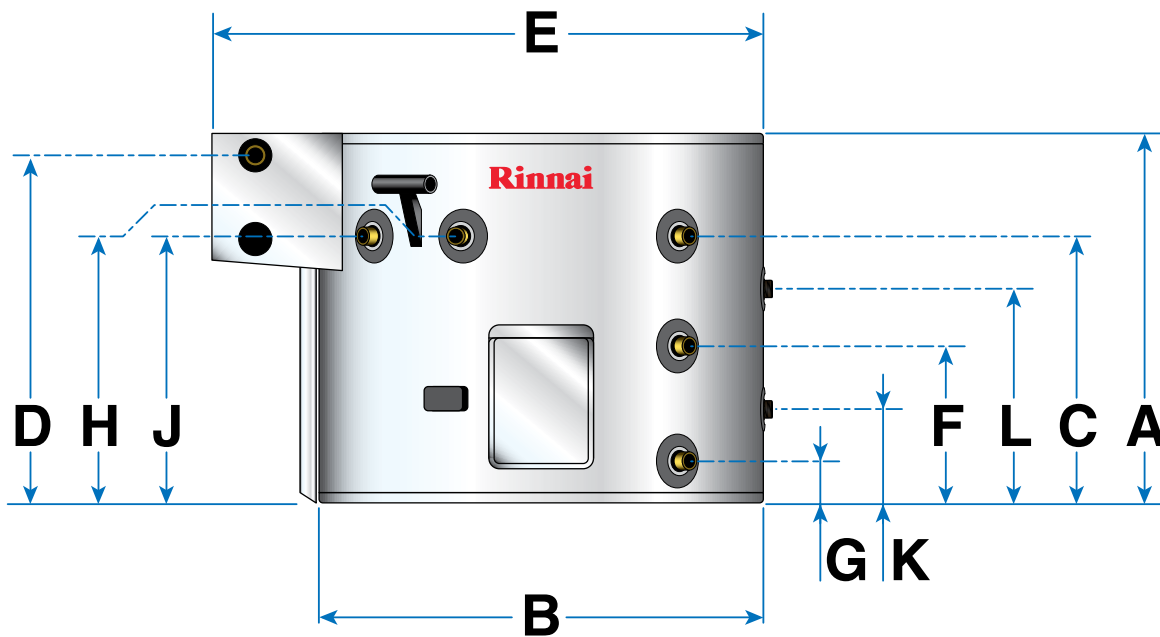
Note: All Rinnai HOTFLO water heaters are single element.

Specifications		HOTFLO								
Rated Capacity (Litres)	40	80	125	160	200	250	315	400		
	Weight Empty (kg)	24	48	62	75	98	107	117	130	
	Heating Elements Available (kW)	-	-	-	-	-	-	-	-	
		2.4	2.4	2.4	2.4	-	-	-	-	
		3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	
	-	-	-	-	4.8	4.8	4.8	4.8		
Dimensions (mm)	Overall Height	A	665	900	1245	1530	1825	1265	1510	1820
	Overall Width inc' PTR	B	470	590	590	590	590	760	760	760
	Tank Diameter	C	395	515	515	515	515	685	685	685
	Outlet Height	D	470	683	1020	1310	1605	985	1200	1512
	Inlet Height	E	75	225	225	225	225	260	260	260
	Electrical Connection Height	F	125	155	155	155	155	155	155	155
	Hot Return (Centurion Only)	G						n/a	n/a	n/a
Max Supply Pressure	Relief Valve Setting (kPa)				1000				850	
	Expansion Control Valve Setting				850				700	
	With Expansion Control Valve				680				550	
	Without Expansion Control Valve				800				680	
When these pressures are exceeded, install a Pressure Limiting Valve (PLV)									-	
Water Connections									RP ¾ 20mm	
Ingress Protection Rating (AS1939)									IPX4	
Power Supply									AC 240 V 50 Hz	



Roofmaster

Specifications		Plus	Prestige		Coil	
Rated Capacity (Litres)		250	250	315	315	
Rated Capacity Connected to Solar (L)		-	280	370	370	
Weight Empty (kg)		32	34	42	59	
Dimensions (mm)	Overall Height	A	725	725	900	900
	Tank Diameter	B	865	865	865	865
	Height - Hot Water Outlet	C	530	530	710	710
	Height - Cold Water Inlet	D	700	700	875	875
	Overall Top Width (inc Head Tank)	E	1020	1020	1020	1020
	Combustion Heater (Hot Flow)	F		325	415	415
	Combustion Heater (Cold Return)	G		85	85	85
	Solar Collector Flow Height	H		535	715	715
	Solar Collector Return Height	J		535	715	715
	Coil - Cold Inlet Connection	K		N/A		140
	Coil - Hot Outlet Connection	L		N/A		670
Safe Tray (Optional)						



Commercial Hot Water Systems

The Rinnai Heavy Duty (HD) water heaters are suitable for single installation, Manifold Pack or Demand Duo installations. Each Commercial application require different quantities of hot water, therefore if you are unsure on the sizing guidelines, please contact our National Commercial Project Division on 1300 555 545 for assistance.

Heavy Duty Units:

Rinnai Heavy Duty (HD) water heaters are a high efficiency gas continuous flow water heater available in three models: HD200e, HD250e and HD200. Refer to page 13 of this brochure for specifications or the Rinnai Commercial Hot Water Reference Guide available to download online at rinnai.com.au

Applications include:

- Cafés
- Child Care Centres
- Hair Dressing Salons
- Small Amenities Blocks
- Butchers
- Factories
- Laundromats with domestic style top loader machines



Heavy Duty

Rinnai Manifold Packs

A Rinnai Manifold Pack consists of 2 to 6 Heavy Duty continuous flow water heaters plumbed together to allow higher flow rates than a single unit can provide.



Manifold Pack

Rinnai Demand Duo Systems

Rinnai Demand Duo is the combination of between 1 to 6 gas Continuous Flow water heaters with single or multiple storage cylinders. The storage cylinder allows a short period of high hot water flow rate, greater than the continuous flow rate of the HD water heater(s). i.e 'peak demand' applications such as:

- Hotels and Motels
- Apartment blocks and Student Accommodation
- Shower Blocks, Caravan Parks, Sports Clubs etc
- Commercial Kitchens
- Commercial Laundries



Demand Duo

Rinnai Commercial Solar Systems

Rinnai Commercial Solar hot water systems provide solar pre-heated water to the Rinnai Commercial gas hot water systems such as the Manifold Pack or Demand Duo system. The system is selected according to the daily hot water demand for the application, the required solar contribution, and what solar zone the system is located in.

Rinnai Common Flue System

Rinnai internal commercial hot water systems can now be flued into a single common natural draft flue. This allows both internal Demand Duo and internal Manifold Packs systems to be installed in existing buildings as well as new applications.

Note: Combustion air is drawn from the plant room.

Rinnai Warm Water Valve

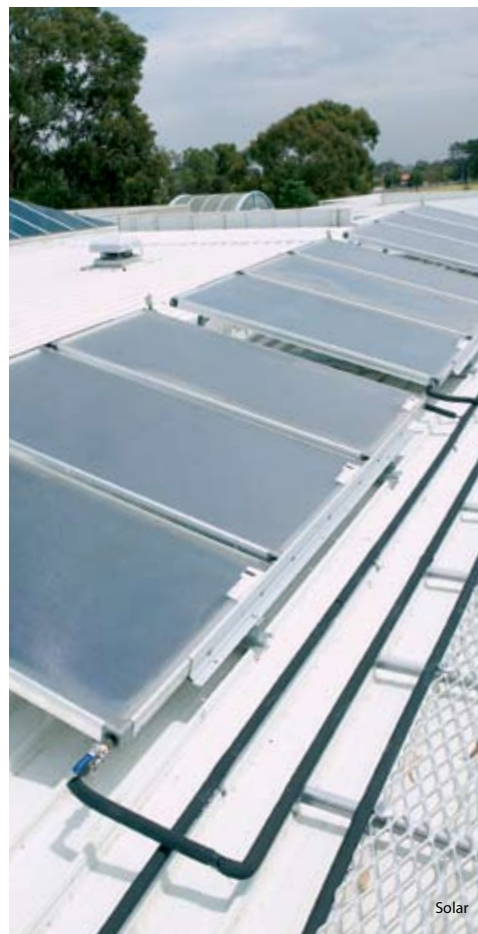
The Rinnai Demand Duo Warm Water Valve is a system that is designed to accept 60°C or more incoming hot water from a storage system and deliver a reduced constant outlet temperature across a full range of flow rates.

Applications include:

- Apartment buildings and hotels
- Hospitals and nursing homes

Approved to AS4032.1 as a Thermostatic Mixing Valve and AS4032.2 as a Tempering Valve. Also approved as a warm water system by NSW Health.

For further information or on site assistance please contact our National Commercial Project Division on 1300 555 545.



Rinnai Service

Need help with an installation?

In most situations Rinnai retailers can assist with the installation of our appliances. Should this not be the case, Rinnai has an installation service available direct to the end-user. Any installation of a Rinnai appliance is a specialist process and requires trained professional installers to ensure safe and efficient operation of the appliance. This is particularly relevant for connection to gas, electrical changeovers and the installation of Solar Collectors. Our Rinnai installers are not only very familiar with our products, but are fully insured and OH&S compliant. Be confident in your installation by employing Rinnai Service.

For further information, please call 1300 555 545

Warranty

Continuous Flow Systems

Continuous Flow Water Heaters ⁽³⁾		All INFINITY Models		Builders Range Models		Heavy Duty (HD) Models		Smart-Start® Water Saver	Water Controllers	Accessories ⁽⁴⁾
		Heat Exchanger	All other components	Heat Exchanger	All other components	Heat Exchanger	All other components			
Domestic Use	Parts	12 Years	3 Years ⁽²⁾	10 Years	3 Years ⁽²⁾	12 Years	3 Years ⁽²⁾	3 Years	3 Years	1 Year
	Labour	3 Years ⁽²⁾	3 Years ⁽²⁾	3 Years ⁽²⁾	3 Years ⁽²⁾	3 Years ⁽²⁾	3 Years ⁽²⁾	3 Years	3 Years	1 Year
Commercial Use	Parts	1 Year	1 Year	1 Year	1 Year	5 Years ⁽¹⁾	1 Year	1 Year	1 Year	1 Year
	Labour	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

(1) One (1) year warranty on Heat Exchanger when pre-set to 85 or 95°C. (2) 5 Years if two or more controllers are installed in domestic applications. (3) The models in this table are unsuitable for solar hot water applications. Any failure or service issue when installed in a solar hot water application is not covered by warranty. (4) Accessories include pipe covers, recess boxes, security brackets and flue diverters.

Solar Systems

Solar Hot Water Systems		Solar Compatible Continuous Flow Water Heaters - models S20 and S26 and other models converted by Rinnai for Solar applications ⁽¹⁾⁽³⁾		Storage Cylinders		Solar Collectors	Components ⁽²⁾
		Heat Exchanger	All other components	Vitreous Enamel (Glass) Lined Sunmaster Range	Stainless Steel Prestige	Enduro Equinox Excelsior E-Frost	
Domestic Use	Parts	10 Years	3 Years ⁽⁴⁾	5 Years	10 Years	7 Years	1 Year ⁽⁴⁾⁽⁵⁾
	Labour	3 Years	3 Years	3 Years	3 Years	1 Year	1 Year
Commercial Use	Parts	5 Years	1 Year	1 Year	5 Years	5 years	1 Year
	Labour	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

(1) The continuous flow models in this column are suitable only for solar hot water applications. Any failure or service issue when installed in a non solar hot water application is not covered by warranty. (2) Components include pumps, system controllers, sensors, thermostats, valves, electric heating elements and anodes where applicable. (3) Rinnai Infinity 26 Internal, HD200i, HD200e and HD250e models can be converted for solar applications by Rinnai by order request. (4) For Victorian installations only - 5 Year warranty on the solar circulating pump, solar controller and components within the continuous flow water heater in order to comply with State legislation. (5) For Queensland installations only - 2 Year warranty on the solar circulating pump in order to comply with State Government legislation where applicable.

Commercial and Other Hot Water Systems

Commercial and Electric Hot Water Systems		Rinnai Demand Duo and Rinnai Manifold Pack systems					Electric Hot Water			
		Continuous Flow Water Heaters used as gas boosters in Demand Duo and Manifold Pack Systems - Heavy Duty (HD) Models ⁽¹⁾		S/Steel storage cylinders	Components ⁽³⁾	Commercial Common Flue and Warm Water Systems ⁽²⁾	Rinnai Roofmaster		Rinnai HOTFLO	
		Heat Exchanger	All other components				Cylinder	Components ⁽³⁾	Cylinder	Components ⁽³⁾
Domestic Use	Parts	12 Years	3 Years	10 Years	1 Year	NA	7 Years	1 Year	5 Years	1 Year
	Labour	3 Years	3 Years	3 Years	1 Year	NA	1 Year	1 Year	3 Years	1 Year
Commercial Use	Parts	5 Years	1 Year	5 Years	1 Year	3 Years	1 Year	1 Year	1 Year	1 Year
	Labour	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year	1 Year

(1) One (1) year warranty on Heat Exchanger when pre-set to 85 or 95°C. (2) Excludes UV system. UV system warranty is covered by the UV system manufacturer (3) Components include pumps, system controllers, sensors, thermostats, valves, electric heating elements and anodes where applicable.

Definitions

Domestic Use:

The warranty periods that are allocated under "Domestic Use" are based on hot water usage patterns of a typical family.

Rinnai "Domestic Use warranty periods apply to:

1. Water heaters installed to supply heated water to domestic dwellings.
2. Water heaters installed to supply heated water to commercial installations such as motel units, hotel rooms, caravans, mobile homes, nursing homes, retirement village complexes and other care institutions and like accommodation provided that maximum delivery temperatures for gas boosted models do not exceed 75°C and do not exceed 70°C for electrically boosted models and that the hot water systems are not installed as component(s) of centralised bulk hot water systems and the installation does not incorporate building flow and return systems.

Commercial Use:

The warranty periods that are allocated under "Commercial Use" are for applications other than domestic use and include premises such as commercial and industrial buildings, cafes, caravan parks and sporting complexes, but not limited to these.

"Commercial Use" warranty applies to:

1. Water heater(s) supplying central shower blocks.
2. Water heater(s) supplying kitchens used for the bulk preparation of food.
3. Water heater(s) delivery temperatures pre-set to exceed 70°C
4. Water heater(s) used in commercial or industrial heating processes.
5. Water heater(s) used in hydronic space heating installations.
6. Any application that uses Rinnai water heater(s) in conjunction with building flow and return systems.
7. Water heater(s) installed as component(s) of centralised bulk hot water system(s).

Full warranty conditions including exclusions, water purity, solar frost tolerant warranty and postcode conditions are available with the appliances and can be viewed on-line at www.rinnai.com.au.

Dimensions are subject to production tolerances and may vary slightly from those given. Rinnai Australia Pty. Ltd. Reserves the right to make modifications and change specifications without notice. We will however endeavour to communicate any major changes well before implementation.

At Rinnai Australia
we are committed to on
going innovation to deliver
efficient, well engineered
and designed products.

We aim to offer a superior
range of home appliances that
provide a clear insight into
what the future holds for
Australian homes.

The simple pleasures of
unlimited hot water, with
precise temperature control,
efficient and stylish heating
solutions and the superb
quality of a Rinnai Outdoor
Kitchen - all designed to
enhance your lifestyle with
the environment in mind.

The Rinnai logo consists of the word "Rinnai" in a bold, white, serif font, centered within a solid red rectangular background.

RINNAI AUSTRALIA PTY. LTD

ABN 74 005 138 769

10-11 Walker Street Braeside VIC 3195

For further information visit

www.rinnai.com.au

or call 1300 555 545