Rinnai

Demand Duo Installation Manual

IMPORTANT NOTICE FOR INSTALLERS

Please leave these instructions with the end user after commissioning of the system and alert the end user of the content in the sections "Warnings" and "Periodic Inspection" and "Maintenance".

This appliance shall be installed in accordance with:

- **Manufacturer's Installation Instructions**
- **Current AS/NZS 3000, AS/NZS 3500 & AS 5601**
- **Local Regulations and Municipal Building Codes**

This appliance must be installed, serviced and removed by an Authorised Person.

The Australian Gas Association
All Rinnai gas products are A.G.A. certified.

N10378

Quality System
Quality Endorsed Company
ISO 9001 Lic 4983 SAI Global
Head Office Certified
Distributed and serviced in Australia under a Quality System certified as complying with ISO 9001 by SAI Global

Certified Product
WaterMark
AS3498 Lic W200 SAI Global

TABLE OF CONTENTS

GENERAL INSTALLATION INSTRUCTIONS

These instructions apply to the Demand Duo range of water heaters:

Models Covered

DD1 200 (external or internal) 250 or 315 (litre tank) N or L (Natural gas or LPG)
DD1 250 (external) 250 or 315 (litre tank) N or L (Natural gas or LPG)
DD2 200 (external or internal) 250 or 315 (litre tank) N or L (Natural gas or LPG)
DD3 200 (external or internal) 250 or 315 (litre tank) N or L (Natural gas or LPG)
DD4 200 (external or internal) 250 or 315 (litre tank) N or L (Natural gas or LPG)
DD5 200 (external or internal) 250 or 315 (litre tank) N or L (Natural gas or LPG)
DD6 200 (external or internal) 250 or 315 (litre tank) N or L (Natural gas or LPG)

Rinnai Demand Duo hot water systems must only be installed, commissioned, service and removed by an authorized person in accordance with these instructions, AS 5601, AS 3000 and AS 3500.4 and local regulations.

Rinnai Demand Duo hot water systems are not suitable or approved as a pool heater.

Read these instructions carefully before proceeding with the installation.

LOCATION

Ensure reasonable access for installation, servicing and removal. All valves, controls and pumps etc must be easily accessible.

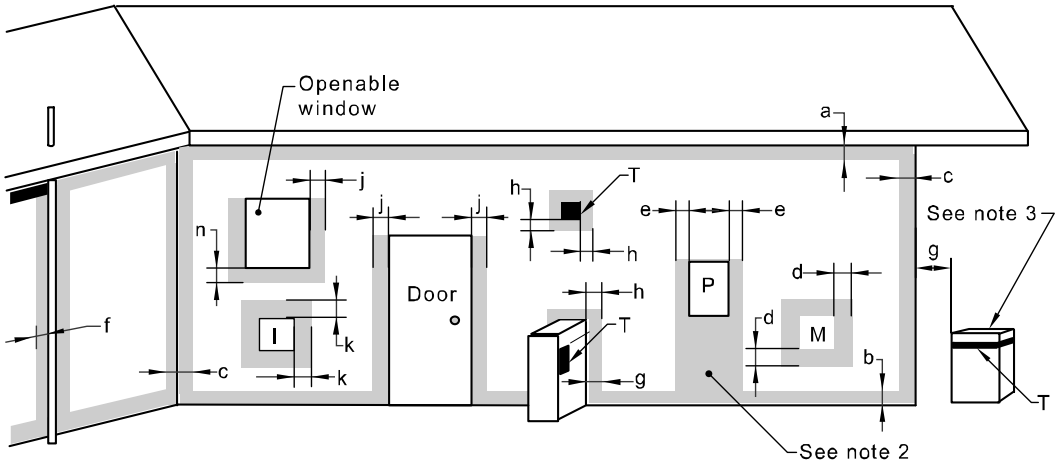
Rinnai Demand Duo tanks and any free stand frames must be mounted on a solid level base, capable of supporting the weight of the appliance when full of water. Ensure components are not allowed to stand in water. Spacers under the tank are recommended in wet areas.

All Demand Duo tanks are "left handed" with the water connections to the left when viewing the thermostat housing from the front.

Gas booster flue terminals must be located in accordance with AS 5601 Fig 5.3 "Location of balanced flue terminals".

Rinnai Infinity and HD units are fan assisted appliances and thus have lower clearances than a natural draft appliance of the same MJ rating.

HORIZONTAL FLUE TERMINAL CLEARANCES (Extract from AS 5601 - 2004)



LEGEND:

T = Flue terminal
I = Mechanical air inlet
M = Gas meter
P = Electricity meter or fuse box
Shading indicates prohibited areas for flue terminals

Ref .	Item	Minimum clearances (mm)	
		Natural draft	Fan assisted
a	Below eaves, balconies and other projections:		
	• Appliances up to 50 MJ/h input	300	200
	• Appliances over 50 MJ/h input	500	300
b	From the ground, above a balcony or other surface †	300	300
c	From a return wall or external corner †	500	300
d	From a gas meter (M) (see 4.7.11 for vent terminal location of regulator)	1000	1000
e	From an electricity meter or fuse box (P)	500	500
f	From a drain pipe or soil pipe	150	75
g	Horizontally from any building structure † or obstruction facing a terminal	500	500
h	From any other flue terminal, cowl, or combustion air intake †	500	300
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Appliances up to 150 MJ/h input	500	300
	• Appliances over 150 MJ/h input up to 200 MJ/h input	1500	300
	• Appliances over 200 MJ/h input up to 250 MJ/h input †	1500	500
	• Appliances over 250 MJ/h input †	1500	1500
	• All fan-assisted flue appliances, in the direction of discharge	-	1500
k	From a mechanical air inlet, including a spa blower	1500	1000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Space heaters up to 50 MJ/h input	150	150
	• Other appliances up to 50 MJ/h input	500	500
	• Appliances over 50 MJ/h input and up to 150 MJ/h input	1000	1000
	• Appliances over 150 MJ/h input	1500	1500

† Unless appliance is certified for closer installation

All distances are measured to the nearest part of the terminal.

Prohibited area below electricity meter or fuse box extends to ground level.

See Clause 5.13.6.6 for restrictions on a flue terminal under a covered area.

See Appendix J, Figures J2(a) and J3(a), for clearances required from a flue terminal to an LP Gas cylinder. A flue terminal is considered to be a source of ignition.

For appliances not addressed above acceptance should be obtained from the technical regulator

FIGURE 5.3 (in part) MINIMUM CLEARANCES REQUIRED FOR BALANCED FLUE TERMINALS, FAN-ASSISTED

GENERAL INSTALLATION INSTRUCTIONS

Flueing for Internal Models

The Rinnai Infinity Flueing system must be installed in accordance with the instructions supplied with the flue terminal. Non Rinnai flueing systems **MUST NOT** be used.

Installations can consist of both horizontal and vertical runs to a maximum of 9 metres with a maximum of three 90° bends.

DD1 & Manifold Pack 3 with horizontal flueing

DD6 Internal Flued System

The Rinnai internal flueing system is highly versatile and makes installation of an internal water heater simple and convenient.

The flueing for internal water heaters is a coaxial design. It is manufactured from an aluminium alloy inner flue pipe to discharge product of combustion and a thermoplastic outer pipe for air supply to the appliance. The water heater is a room sealed appliance.

NOTE: Each Rinnai water heater is flued individually.

As it is fan assisted, the water heater can be flued vertically, horizontally or any combination of both, to a maximum of 9 metres and 3 x 90 degree bends.

Horizontal flueing can be used as a direct wall flue or extended from another internal wall.

Vertical flueing is used when the water heater needs to be flued vertically through the roof.

A condensate trap is required when vertical flue exceeds 1.5 metres.

Rinnai HD internal water heaters classified as 'room sealed' appliances. Flue systems must be installed in accordance with Rinnai Installation Instructions (supplied with flue terminals), local gas fitting regulations, municipal building codes, AS5601 and all other relevant statutory regulations.

The flue terminal clearances in AS 5601 / AG 601 do not apply to the HD200e and HD250e heaters installed side by side. These appliance are AGA certified to be located side by side, for both internal an external models.

INTERNAL FLUEING ORDER CODES

a.	Elbow 90° Bend & Adaptor	FFBEND90BA
b.	Ceiling / Wall Ring	FFWSEAL
c.	External Wall Plate	FFWPLATE
d.	Horizontal Flue Terminal	FFWALLTERM
e.	Universal Bend (2 x 45°)	FFBEND
f.	Flue Pipe 1000 mm length*	FFPIPE1000
g.	Vertical Flue Terminal*	FFROOFCOWL
h.	Condensate Trap	FFCONDK
i.	Vertical Adaptor	FFADPT
* Supplied with pipe clip		

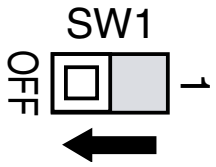
Discuss with your Rinnai Commercial representative for further details

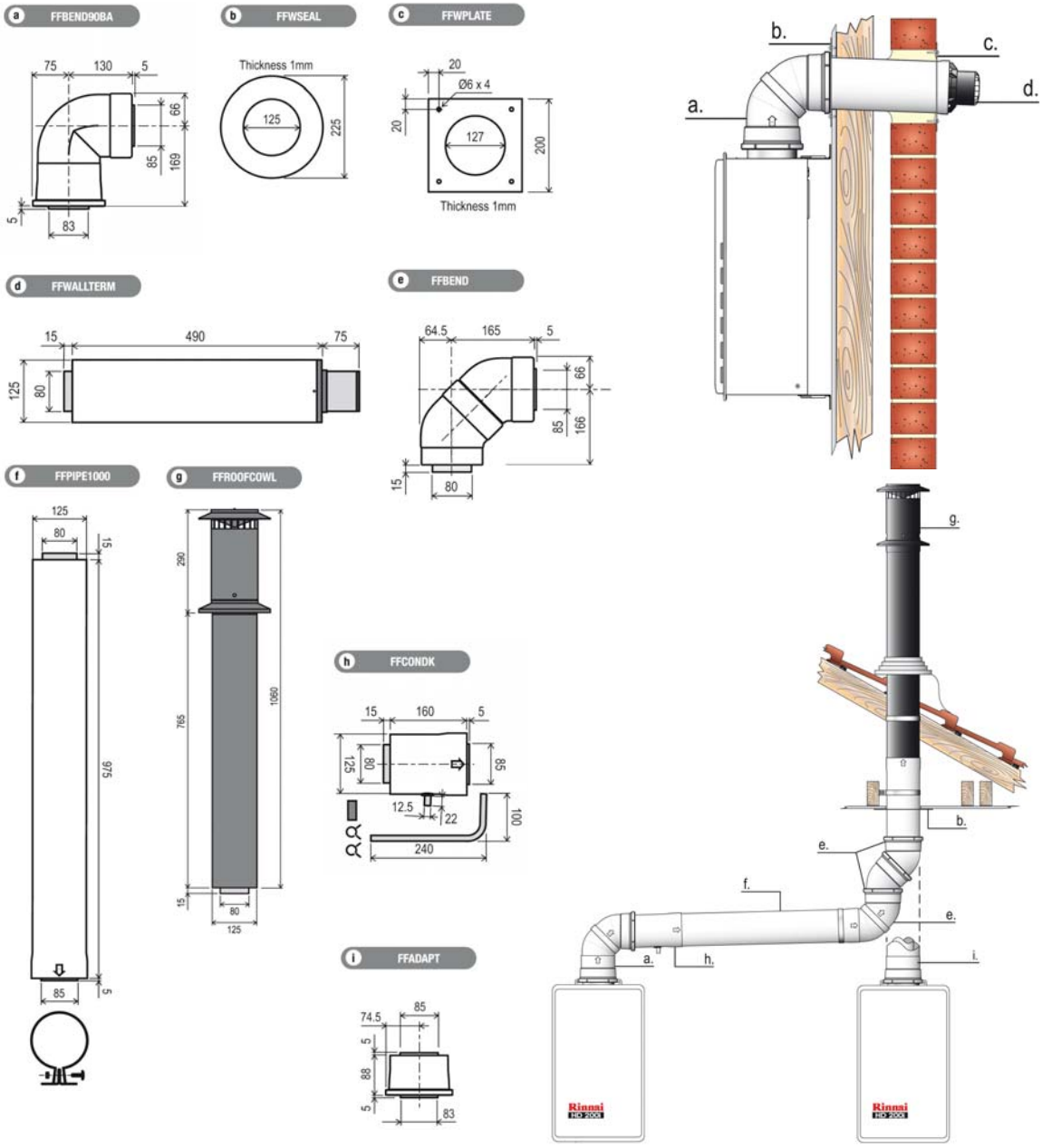
DD6 Direct Wall Flue

Note: Only Rinnai flueing systems can be used with internal water heaters. Non-Rinnai flueing systems are not certified and will not be covered under warranty.

GENERAL INSTALLATION INSTRUCTIONS

If flue length exceeds 2 metres, dip-switch 1 of SW1 located inside the HD unit is to be switched to the 'OFF' position as shown below.



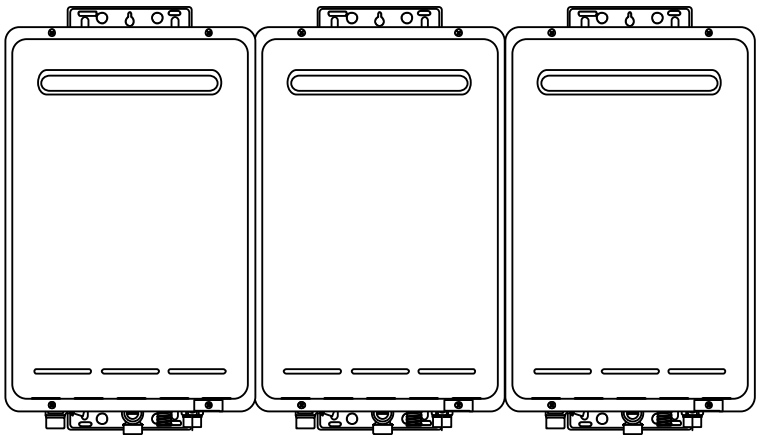


NOTE

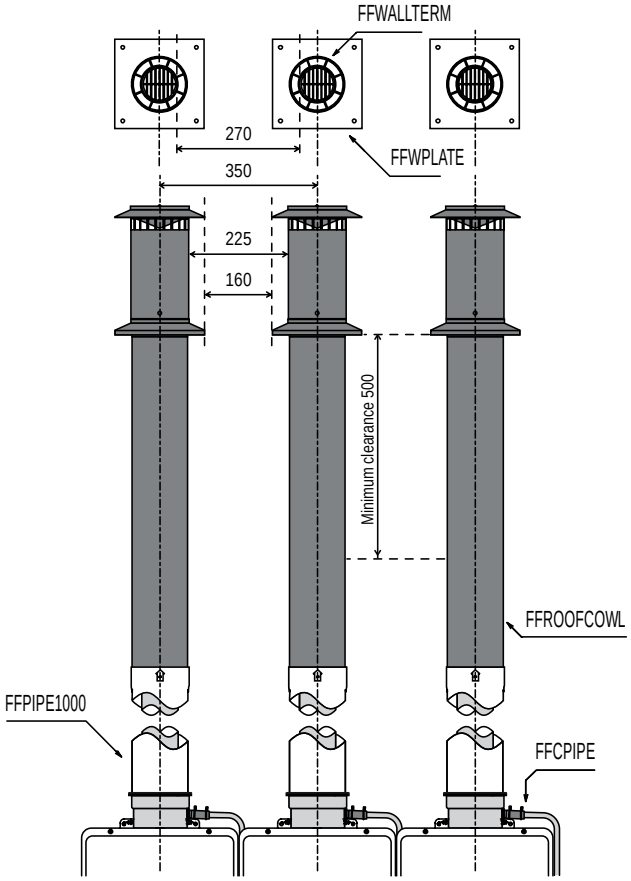
Overall length is reduced by 35 mm per join when adjacent flue components are joined together.

Multiple Flue Terminals:

Dimension 'h' in AS5601 Figure 5.3 does not apply when multiple Rinnai external water heaters of the same model are installed on the same vertical face with flue terminals at the same height. Under these conditions appliances can abut each other as shown below:



The terminal clearances stated in AS5601 do not apply to the Infinity HD200 and 26 litre internal water heaters when they are installed side by side. AGA certification allows for a minimum horizontal separation of 160mm for roof terminals and 270mm for wall terminals:



NOTE

All Demand Duo systems with HD200 water heaters have the manifold and flue centres at 375 mm. This is slightly further apart than above and is acceptable.

GENERAL INSTALLATION INSTRUCTIONS

Installation:

Unpacking DD1

Remove outer cardboard box. Remove screws attaching feet on tank to wooden pallet.

Carefully remove tank and attached gas booster from pallet and inspect for any transport damage. Ensure that PTR valve, supplied in box is located and stored. Do not install if any components are damaged.

Unpacking DD2 +

Tank:

Remove outer cardboard box. Remove screws attaching feet on tank to wooden pallet.

Carefully remove tank from pallet and inspect for any transport damage. Ensure that PTR valve, supplied in box is located and stored. Do not install if any components are damaged.

HD water heaters:

With cardboard box in upright position, remove packing straps and slide lid upwards. Remove water heater from base when required for installation.

Manifold:

Remove manifold, pump and PTR valve(s) and fittings as per bill of materials table below:

DD MODEL	PTR VALVE packed with tank	PTR VALVE packed with manifold	BOILER VALVE packed with manifold	FITTINGS packed with manifold
DD1 200	1 x HT575	N/A	N/A	N/A
DD2 200	1 x HT575	1 x HT575	N/A	N/A
DD3 200	1 x HT 575	2 x HT575	N/A	32 mm tee etc
DD4 200	1 x HT 575	N/A	1 x valve	N/A
DD5 200	1 x HT 575	N/A	1 x valve	N/A
DD6 200	1 x HT 575	N/A	1 x valve	N/A
ALL HT575 PTR valves are rated at 850 kPa				

Assembly:

Demand Duo 1

- Position tank in desired position.
- Attach PTR valve supplied in box to port at top of tank. Plug off second port with 20 mm plug supplied.
- Run PTR valve drain to suitable discharge position.

Demand Duo 2 +

- Position tank in desired position.
- Attach PTR valve supplied in tank box to 20mm port at top of tank.
- Attach second valve to the other 20mm port at top of tank.
- Attach the third PTR valve on a DD3 to the hot outlet with the 32 mm threaded tee, nipple and 32 mm male/20mm female reducer supplied.
- Run PTR valve drains to suitable discharge position
- Mark line on wall where top of HD water heaters are to be located.

  A useful nominal height is 1500mm from floor level. This may change depending on desired position of flue terminal. It may be higher in trafficable areas or to reduce vertical flue length, for example.

- Mark 375mm centres for HD200 heaters on DD2,3,4,5 and 6, allowing sufficient space between tank and the nearest heater for the primary pump(s) and pipework.
- Attach first heater to wall, preferably a centre heater.
- Connect manifold to heater and confirm that marked centres match the manifold.
- Attach rest of heaters to wall and connect manifold.Attach 32mm tee to cold inlet on tank, with union as required. Cold inlet is lowest fitting on the tank, 285 mm from the tank base.
- Join inlet of primary pump to tee at cold inlet fitting on tank with 32mm pipe.
- Join outlet of primary pump to inlet of cold (bottom) pipe on manifold.
- Fit cover so that pump is weatherproof. Ensure power cable enters pump from below s that it is not a track for water to enter pump.

GENERAL INSTALLATION INSTRUCTIONS

NOTE

When direct flueing through the wall that the water heaters are mounted on, it may be necessary to attach flue to water heater and push it through the wall before attaching the water heater to the wall.

DD MODEL	PRIMARY PUMP*	PUMP UNION SIZE	MANIFOLD PIPE*
DD1 200	1 x UPS 20-60B	20 mm	32 mm
DD2 200	1 x UPS 25-80B	25 mm	32 mm
DD3 200	1 x UPS 25-80B	25 mm	32 mm
DD4 200	1 x UPS 25-80B	25 mm	32 mm
DD5 200	1 x UPS 25-80B	25 mm	32 mm
DD6 200	1 x UPS 25-80B	25 mm	32 mm

- Remaining port on the tee is the cold water inlet to the system. It is also the ringmain return point.
- Extend 32 mm hot return pipe (centre pipe) from end of manifold to the return fitting on the tank with union as required. This fitting is 385 mm from the tank base.

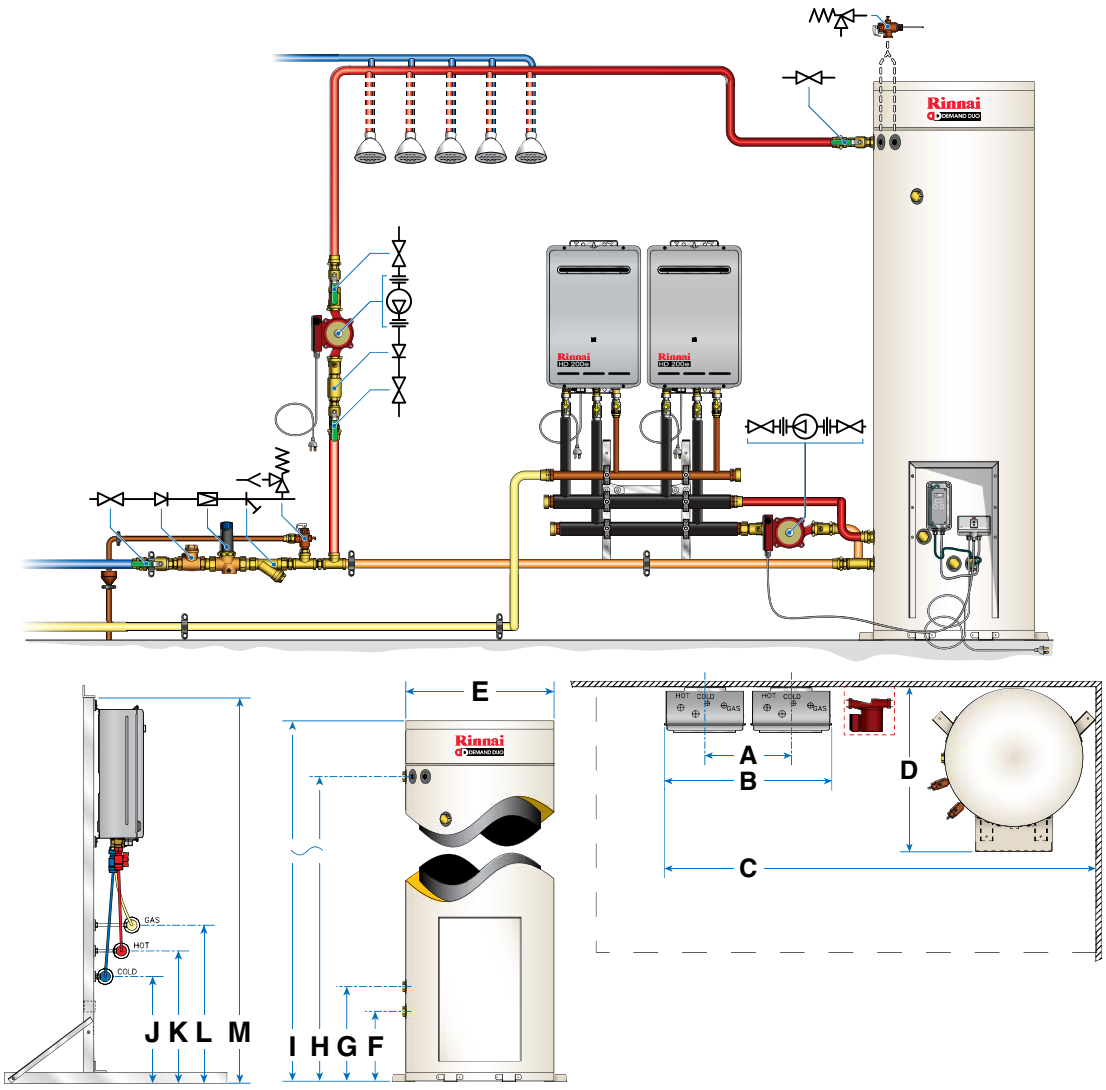
System is now ready to be plumbed to the building.

NOTE

Primary pump and/or primary pipe work may need to be increased for long runs of primary pipe work, or installation with many bends in the pipe work between tank and manifold.

- Plug primary pump into switched GPO on tank. **Note: DD1 is hard wired already. Primary pump will only operate when switched by thermostat,**
- Plug power supply to thermostat in tank to GPO. Do not turn on.
- Plug water heaters on DD2+ to GPO. Do not turn on.

TYPICAL RINNAI DEMAND DUO INSTALLATION



Model	A	B	C	D	E	PTR INCLUSIONS	Primary pump	MJ Rating (HD200's)	Total System Weight (315L)
DD1	375	N/A	600	715	600	1 x HT575	UPS20-60B	200	92
DD2		725	1825			2 x HT575	UP25-80B	400	115
DD3		1100	2200			3 x HT575+Tee	UP25-80B	600	135
DD4		1475	2575			1 x HT575	UP25-80B	800	155
DD5		1850	2950			1xBoiler Valve	UP25-80Bx2	1000	175
DD6		2225	3325				UP25-80Bx2	1200	190

Tank Model	F	G	H	I	Dry Weight	Wet Weight
250 Litre	285	385	1475	1690	60 kg	310 kg
315 Litre			1855	2080	72 kg	385 kg

HD Model	J	K	L	M
HD200e	410	510	610	1500
HD200i	340	440	540	

GENERAL INSTALLATION INSTRUCTIONS

Cold Water Supply:

- Cold water pipe work to inlet of tank, including required valves as shown above to comply to AS 3500 and local regulations.
- Maximum cold water inlet pressure is 650 kPa. Fit pressure limiting valve (rated @ 700 kPa) if cold water inlet pressure is in excess of 650 kPa.
- For ease of draining, it is advisable to fit a "Tee" piece with a capped valve between the cold water isolation valve and the cold water inlet connection on the Demand Duo storage cylinder. Tap provided.

Hot Water Outlet

- Connect hot water outlet pipe to 32mm fitting on upper left hand side of the storage cylinder with union and isolation valve as required.
- Ensure adequate insulation / lagging is fitted to hot water pipe to minimize heat loss.

Return Pump

- A secondary or building return pump may be installed in conjunction with the Rinnai Demand Duo hot water system. Pump should be sized for minimal temperature loss around the ringmain. Pump must have a check valve on the discharge.
- Return line from building loop is connected to the cold water supply pipe after the check valve. From that point onwards the cold pipe should be insulated.

Gas Supply

- Check gas type of Rinnai Infinity matches gas supply available (LPG or Natural) on job site.
- Gas inlet connection is located at the front bottom of the weather shroud on a DD1 and is the top pipe on a DD2+ manifold.
- Appropriate gas isolation valve to be fitted to DD1. DD2+ have gas isolation valves per water heater.
- Ensure gas pipe sizing is adequate to deliver the required volume / pressure. Pipe size used on inlet fitting is no indication of pipe size required.
- Refer to appropriate pipe sizing chat in Appendix "F" AS5601 for appropriate sized gas pipe that should be used to ensure adequate gas supply.
- Gas meter / LPG cylinder & regulator should also be of a suitable size to ensure sufficient gas supply to the gas installation.
- Purge gas pipe to ensure removal of debris etc prior to final connection.
- Check for gas escapes using suitable methods as listed in Appendix "E" AS 5601.

Filling Instructions

Do Not turn on pump / gas booster before cylinder and water heater are completely full of water.

- Flush cold water inlet pipe to remove any debris before final connection to cold water inlet on Rinnai Demand Duo cylinder.
- Turn on hot water tap to allow air to be expelled while cylinder is filling with cold water.
- Slowly open cold water isolation valve on cold water supply pipe.
- Allow cylinder to fill. Turn off hot water tap once non-aerated water flows through hot water tap.
- Check all connections for water leakage. Tighten as required.
- Purge gas lines until gas is available at water heaters.
- Prime circulating pump(s) before start up by removing chrome screw and allowing water to drip out the end of the pump shaft.

Starting Instructions

- Turn all GPO's on.
- Thermostat will scroll through self check and display will settle on water temperature within the storage cylinder.
- Green LED on thermostat will illuminate when power is available to primary pump when water in tank is below set temperature. Pump should start. Water flow will cause water heater to start.
- For standard systems "75" should appear in the maintenance monitor window on the gas heater. That is the outlet temperature from the water heater. It must be higher then the thermostat set point.
- Thermostat will display temperature of water in tank. When it reaches the 65°C set point the pump and, therefore, water heater will stop. The display on the water heater will not be lit when not operating.

Demand Duo Principle of Operation

Cold water enters the storage tank after passing through an isolation and non return valve.

A tee is fitted to the cold inlet pipe down stream from the non return valve. From this tee, one branch connects to the lower inlet of the storage tank and the other branch connects to the primary (tank circulation) pump. This pumps water to the inlet of the infinity(s) heat source. The infinity will only operate when this pump is running.

The heated water from the infinity returns to the tank at the second lowest connection point, located above the cold inlet.

Hot water leaves the tank from the top of the tank. This may be circulated around the building and returned, via a ringmain pump (set) to the cold inlet before the tee as described above.

When there is a hot water draw off, cold water enters the tank and pushes the hot water out of the tank towards the outlet, as per any storage hot water system.

When the temperature in the tank drops below the thermostat set point, the thermostat activates the primary pump(s). They draw water from the cold water feed to the tank, the tank itself, or a combination of both. As stated previously, this water is then heated by the infinity and returns to the tank heated. This process is continued until the thermostat set point is reached and the pump is switched off.

The outlet temperature setting of the infinity must be set at least three (3) degrees hotter then the thermostat set point. Factory settings are: Infinity 75°C, thermostat 65°C.

Demand Duo Preventative Maintenance

All Items

- Inspect for damage, corrosion or water leaks

Tank

- Ensure that tank is not leaking.
- Ensure that PTR valves are not leaking. It is normal for PTR valve to operate during the heating cycle, relieving pressure as the water is expanding. The PTR Valve is rated to 850 kPa and cold inlet pressure should not exceed 500-700 kPa. If it does, then a pressure reduction valve should be fitted to the cold water inlet.
- Valve may be operating if water temperature in tank is close to 99°C. If this is the case the thermostat or other heating equipment has failed to operate correctly. Contact Rinnai service department.
- If pressure and temperature are low but valve is leaking, pull the lever for up to 30 seconds, as some foreign material may be jammed in the valve seat. If valve fails to seat correctly, valve should be replaced. PTR Valves are a non-repairable safety device and should be replaced with the correct model and pressure rating.

Thermostat

- Check that display is in degrees C and that the flame symbol is showing. This indicated heating mode. A snowflake means cooling mode and needs to be set properly.
- A power surge can reset the thermostat to Fahrenheit. This can be changed back to Celsius by pushing up and down arrows simultaneously for a few seconds. This can only happen if the jumper inside casing is in program position. It is not when it leaves DD factory.
- Check that power is available to system at GPO.
- Standard set point is 65°C and differential will be 5°C.
- When temperature drops below set point minus differential (eg 65°C - 5°C = 60°C) the green light in the thermostat will come on.
- This sends power to the tank mounted GPO (or direct to the primary pump on a DD1). This will start the operation of the primary pump(s)
- Ensure thermostat sensor is pushed all the way into the well in the tank
- Check that power is available at pump or GPO if necessary.

Primary Pump

- DD1 = Grundfos UPS20-60B set to speed 3
- DD2,3,4 = Grundfos UP 25-80B.
- DD5,6 = 2 x Grundfos UP25-80B.
- DD1 wired directly to thermostat, DD2,3,4 plugs into switched GPO on tank, DD5,6 two pumps plugged into double switched GPO in tank.
- Some projects may have larger and/or dual pumps for redundancy or long primary pipe run situations.
- Pump(s) operate when activated by thermostat, as indicated by green light on thermostat.

- Ensure that pumps are installed in a weather proof location or protected from being subjected to water ingress. By themselves they are not. Wet pump electrics may cause failure. Water can run along power lead so keep the lead looping under the pump and curving upwards toward the electrical box.
- Ensure shaft is horizontal. **DO NOT** aim shaft upwards or downwards.
- **DO NOT** locate terminal box under pump housing. Position it on top preferable or on side
- **Bleed pump with chrome screw at end of pump casing**. This will be facing towards you when the pump shaft is horizontal. Pump runs on water bearing and is critical for life of pump. Excessive noise indicates damage or lack of bleed.
- When this screw is removed the spinning / stationary impeller shaft can be inspected.
- Ensure pump direction of flow arrow is towards infinity(s).
- If shaft is spinning but there is no flow: Check ball valves and any non return valve for correct installation and operation. UP25-80B pumps have inbuilt ball valves in the unions. Line up screwdriver slot parallel to pipe to position them open.

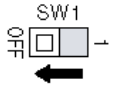
Infinity Heat Source

- Ensure that filter at water inlet is clean. **Note that this is an 'O' ring seal and does not need to be excessively tightened. Just make sure 'O' ring is engaged inside machined surface in brass housing. Isolate water supply to DD before removing filter for cleaning & inspection. Ensure water in storage cylinder is not excessively hot before removing Infinity inlet filter.**
- Ensure all Infinity's are operating. Ensure power is available to Infinity if it is not operating. Can check GPO. DD1 is hard wired to junction box. DD2+: ensure power is available to the Infinity before applying power to thermostat and pump(s).
- Many new jobs or ones where the gas supply has been modified need to purge the gas supply lines as they are full of air. Purge should be carried in accordance with AS5601, Appendix 'D'.
- All models up to late 2006: Look at flame through inspection window for conical shape, blue base and yellow tip. Flame height will vary if heater is modulating. Inspection window is located in front cover of appliance.
- All new HD models: when operating the number displayed should be higher than the temperature setting on the tank mounted thermostat.
  - Eg Tank = 65°C, Infinity = 75°C. These are factory standard settings.
  - Eg Tank = 82°C, Infinity = 85°C. These are the maximum allowable settings.
- All new HD models will display a fault number if one has occurred. Below is a full list of fault codes.
- In jobs that operate for long hours and/or in dusty or smoky environments the combustion air fan may become dirty. This may be indicated by fault 10. Contact Rinnai Service.
- Internal heaters may operate for a short period of time and then stop. This can be caused by the flueing not being pushed together properly and exhaust gases are re-entering the inlet air. Push the flue together to remedy this. Also inspect flue terminal for any cause to divert exhaust air back into the inlet air. Ensure flue is terminated correctly in accordance with AS 5601.

For Internal (FFU) models only

☑ Have you used only RINNAI FFU flueing components?

☑ If flue length exceeds 2m, dip-switch 1 of SW1 is to be switched to the '**OFF**' position as shown.



INSTALLATION HAND OVER MANUAL

Your Rinnai Continuous Flow water heaters has a self diagnostic capability. If a fault occurs, an Error Code will flash on the Digital Monitor. If you have Temperature Controllers. This assists with diagnosing the fault, and may enable you to overcome a problem without a service call. Please quote the code displayed when enquiring about service.

Infinity Fault Codes

ERROR	FAULT	REMEDY
-	Noticeable reduction in water flow.	Inlet water filter needs to be cleaned. Service call.
03	Power interruption during Bath fill (Water will not flow on power reinstatement).	Turn off all hot water taps. Press ON/OFF twice.
10	Air intake or flue blocked	Service Call.
11	No ignition / No gas supply	Check gas is turned on at water heater and gas meter or cylinder.
12	Flame Failure / Low gas flow	Check gas is turned on at water heater and gas meter or cylinder. Check that nothing is obstructing flue outlet. Turn on gas supply to water heater.
14	Remaining Flame Safety Device	Service Call.
16	Over Temperature Warning	Service Call.
32	Outgoing Water Temperature Sensor Faulty	Service Call.
33	Heat Exchanger Outlet Sensor Faulty	Service Call.
34	Combustion Air Temperature Sensor Faulty	Service Call.
52	Gas Modulating Valve Faulty	Service Call.
61	Combustion Fan Failure	Service Call.
65	Water Flow Control Faulty (Does not stop flow properly)	Service Call.
71	Micro-processor Failure	Service Call.
72	Micro-processor Failure	Service Call.
In all cases, you may be able to clear the Error Code simply by turning the hot water tap OFF, then ON again. If this does not clear the Error Code, try pushing the ON/OFF button OFF, then ON again. If the Error Code still remains, contact Rinnai for advice.		

Ringmain Pump

- These are used for circulating water around the building. They are normally left on or may have a time clock to switch it off at night when the building is not in use.
- These pumps do not pressurise the system.
- They must have a non return valve.
  - Swing non return valves must be horizontal or upward as the rely on gravity to close the valve.
  - Spring check valves can be located on any plane but may contribute excessive back pressure and restrict the pump flow rate.
- Return water should only be slightly cooler than water leaving the tank. If the temperature drop around the circuit is too high it may indicate that the ring main pump flow rate is not high enough and indicates a design fault or a blockage in the pipework (or poor pipework insulation). Investigate valves and operation of pump (same procedure as primary pump).

Service:

Rinnai recommend that all commercial water heater installations have a service arrangement.

Annual services are recommended at a minimum. Refer to the back cover for contact information.

Rinnai

Rinnai Australia Pty. Ltd. ABN 74 005 138 769

Head Office

10-11 Walker Street,
Braeside, Victoria 3195
P.O. Box 460
Tel: (03) 9271 6625
Fax: (03) 9271 6622

Internet: www.rinnai.com.au E-mail: enquiry@rinnai.com.au

National Help Lines

Spare Parts & Technical Info
Tel: 1300 366 388*
Fax: 1300 300 141*
Cost of a local call Higher from mobile or public phones.

Hot Water Service Line
Tel: 1800 000 340

Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires a service, please call our Hot Water Service Line. Rinnai recommends that this appliance be serviced every 3 years.

BARCODE
123 45678 90123 4

U-PART Nº.
Printed in Japan YYYY.MM