

CONTINUOUS FLOW HOT WATER

6-star energy efficiency, mains pressure delivery, space and energy saving options.

Factory-tested, pre-assembled, and delivered as a complete package.



CASE STUDY

OAKWOOD PREMIER MELBOURNE SOUTHBANK, VIC

Challenge

Oakwood Premier Melbourne is set within a 40-storey tower boasting 132 luxurious hotel rooms and 260 serviced apartments, co-working space, fitness centre, game room, restaurant and bars.

The introduction of the electronic staging and rotation on the Tankpak Series 3 model

was essential for satisfying the energy saving requirements. A long history of partnership with both ADP Consulting and Complete Plumbing led to a successful solution design and implementation.

Hot Water Solution

Servicing a maximum first hour capacity of 13,985 L and providing 12,345 L/hour recovery, the final installation included 3 x TP3E05NFD/1430 Tankpak Series 3 Systems with 3 x Rheem 610430 Storage tanks.



CONTINUOUS FLOW HOT WATER

FOR CONTINUOUS HOT WATER FLOW IN HIGH DEMAND ENVIRONMENTS



GAS



RATING



CONSTANT TEMP



FROST PROTECTION



FAULT PROTECTION

The continuous flow water heater with 6-star energy efficiency.

HIGH ENERGY EFFICIENCY

6-star energy rating and 84% thermal efficiency

CONSTANT TEMPERATURE

Q-factor® provides constant temperature at the outlet rapidly reducing 'cold water sandwich'

COMPATIBLE WITH OTHER SYSTEMS

Compatible with solar, heat pump and waste heat systems. EZ Link® two units together with a greater capacity and redundancy

FAULT PROTECTION

Unique Flame Safe® technology detects heat exchanger faults and shuts the system down

MORE KEY FEATURES

- Digital temperature display (Tankpak, Commpak and Commpak Plus)
- Internal and external models available
- Natural gas and propane models
- Frost protection
- Suitable for sanitising applications when set at 82°C



External Model

Internal Model



*5 year warranty on heat exchanger with a thermostat setting not exceeding 75°C; 12 months heat exchanger warranty when used with a thermostat setting exceeding 75°C; 12 months parts and labour.

TECHNICAL DATA

RHEEM COMMERCIAL CONTINUOUS FLOW		EXTERNAL MODEL	INTERNAL MODEL
MODEL		872627	862627
Delivery Temperature	°C	Up to 82	Up to 82
Input	MJ/h	205	205
Output	kW	46.5	46.5
Efficiency	%	84	84
Gas Energy Rating	Stars	6	6
Flow Rate @ 25°C Rise	L/min	27	27
Minimum Flow Rate	L/min	2	2
Dimensions			
Height	mm	600	650
Width	mm	350	350
Depth	mm	225	250
Frost Protection		yes	yes
Approximate Weight	kg	24	27
Inlet/Outlet Connections	BSPM	R ³ / ₄ /20	R ³ / ₄ /20
Gas Connection	BSPM	R ³ / ₄ /20	R ³ / ₄ /20
Water Supply Pressure			
Maximum	kPa	1000	1000
Minimum	kPa	140	140
Gas Supply Pressure Range			
Natural Gas	kPa	1.13 – 3.5	1.13 – 3.5
Propane	kPa	2.75 – 3.5	2.75 – 3.5
Temperature Settings	°C	38, 40, 42, 43, 45, 50, 55, 60, 65, 70, 75, 82	38, 40, 42, 43, 45, 50, 55, 60, 65, 70, 75, 82
Factory Set Temperature	°C	60	60
Co-Axial Flue Specification			
Inner – Material/Diameter	mm	NA	316L or 444/78
Outer – Material/Diameter	mm	NA	Aluminised Steel/127
Maximum Flue Run		NA	13.5m and no bends ¹
Accessories			
Pipe Cover		299425	NA
Recess Box		299831	NA
Security Bracket		299868	299868
Security Cage		299867	NA
Gas Booster Mounting Kit (suit TP01)		299100	29100
EZ Link® Kit		299291	299291
Temperature Controllers (Max 60°C)			
Kitchen		299850	299850
Bathroom 1		299851	299851
Bathroom 2		299852	299852

¹Reduce the maximum length by 1.5m for every 90° elbow and by 0.75m for every 45° elbow. The flue system is suitable for through the roof and through the wall termination when used with the appropriate terminal.

CONTINUOUS FLOW FLUE SYSTEM

The Rheem 27 CFWH is available in models suitable for indoor installation. The flue system is room sealed concentric design manufactured from high grade stainless steel inner and aluminised steel outer.

HERE'S A GUIDE TO SELECTING THE FLUE COMPONENTS YOU NEED.

- The overall dimension of each flue piece is shown in the drawings
- Allow approximately 35mm for insertion of each flue piece. Refer to Pak dimensional drawings for height of flue spigot from floor level
- Determine the lineal distance and number of 45° and/or 90° elbows between the top of the water heater and flue terminal. Note, the bottom edge of a vertical flue terminal must be 500mm away from the nearest structure in accordance with AS/NZS 5601.1
- Flashing is required to be installed where a vertical flue section penetrates the roof line (not supplied)
- Separate ventilation for combustion is not required as the air for combustion is supplied in the flue outer
- The flue system is suitable to be installed with zero clearances between the water heaters and combustible materials
- Flue termination must comply with the requirements of AS/NZS 5601.1
- Flue penetrations through walls and ceilings must be sealed in accordance with local fire regulations
- The maximum flue length with no elbows is 13.5m. Reduce the maximum length by 1.5m for every 90° elbow and by 0.75m for every 45° elbow
- The flue system is suitable for through the roof and through the wall installation when used with the appropriate terminal

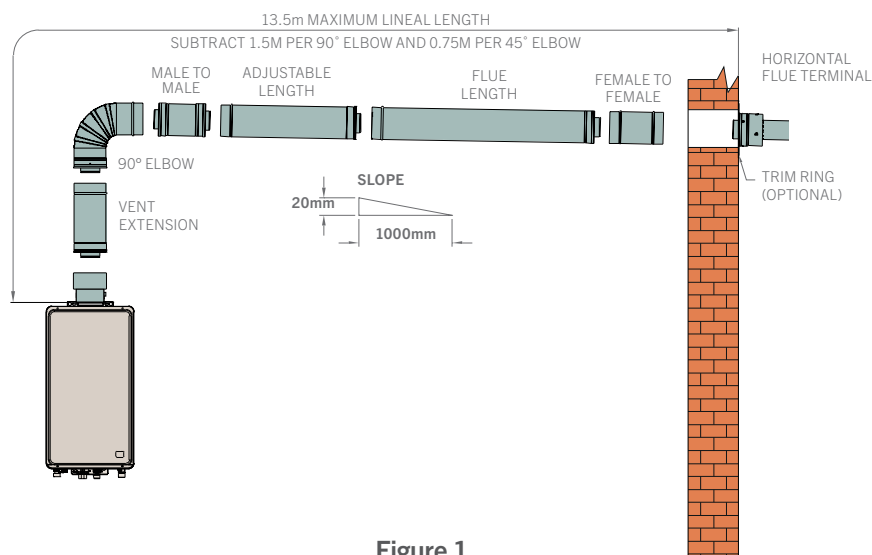


Figure 1

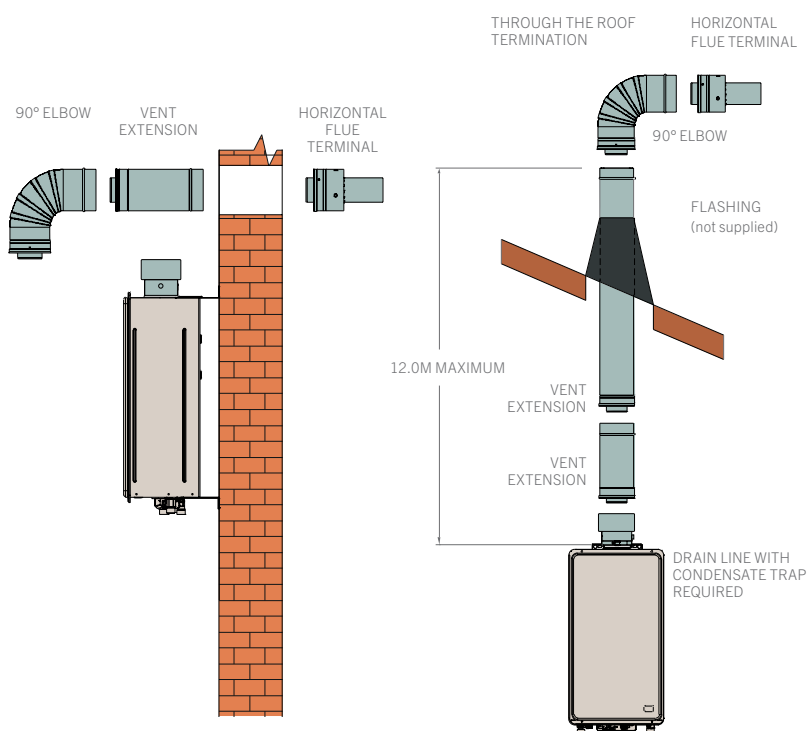


Figure 2

Figure 3



Rheem INTERNAL CFWH must only be installed using certified Rheem coaxial flue components. Do not use any other type of flue system. Carefully follow the installation instructions.

TECHNICAL DATA

CONDENSATE DRAINAGE

- The Flue outlet incorporates a condensate drain which is supplied capped. A condensate tube and trap assembly is supplied with Tankpak and may be required for Commpak and Multipak (sold separately). The condensate drain must be connected to the tube and trap assembly in any through the roof installation to remove any condensate which may form in the flue

- Where 2 x 90° elbows create a vertical section in either through the wall or through the roof flue systems, the horizontal section between the elbows must slope towards the water heater and a condensate tube and trap assembly must be used to prevent condensate from pooling in the horizontal section, see Fig 5
- Horizontal through the wall flue systems are to be oriented with a

slope towards the terminal to drain any condensate which may form in the flue way and prevent any rain from draining into the flue/building. A condensate tube and trap assembly **MUST NOT** be connected, see Fig 4

- Where vertical sections exceeding 2m are incorporated in a through the wall flue system, Condensate tube and trap assembly **MUST** be used, see Fig 4

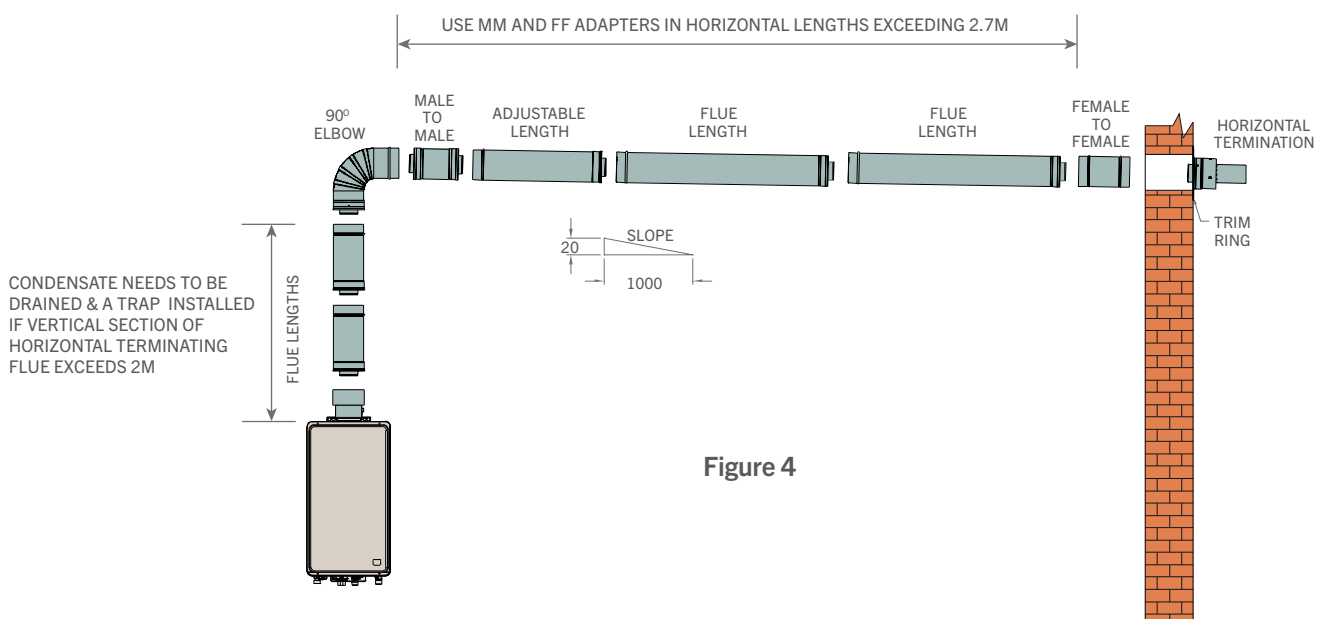


Figure 4

MALE MALE AND FEMALE FEMALE ADAPTERS

Horizontal flue sections in through the wall flue systems are to be oriented with a slope towards the terminal to drain any condensate which may form in the flue way and prevent any rain from draining into the flue/building.

Where the horizontal section exceeds 2.7m (ie. more than 3 x 900mm lengths) a Male Male Adapter P/No 295151 and a Female Female Adapter P/No 295150 must be used to limit the potential for condensate to pool within the flue section.

These adapters reverse the direction of the flue insertion and allow condensate to drain to the horizontal terminal without any obstruction/pooling, see Fig 4.

HORIZONTAL SECTION BETWEEN 2 X 90° ELBOW CREATING A VERTICAL SECTION MUST SLOPE TOWARDS THE WATER HEATER. CONDENSATE NEEDS TO BE DRAINED AND A TRAP INSTALLED.

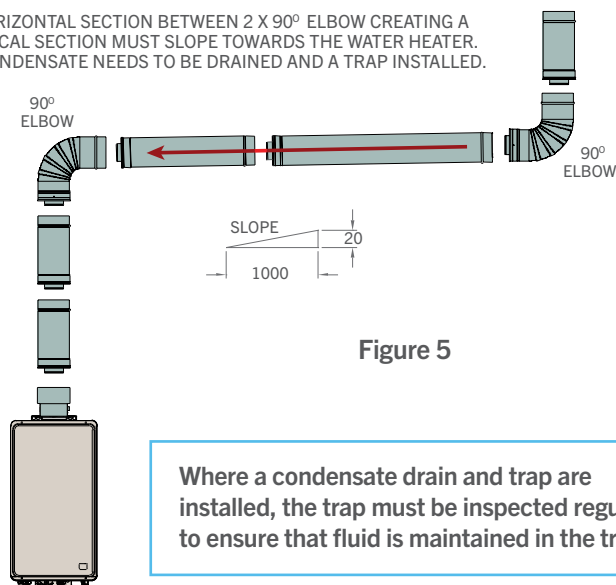


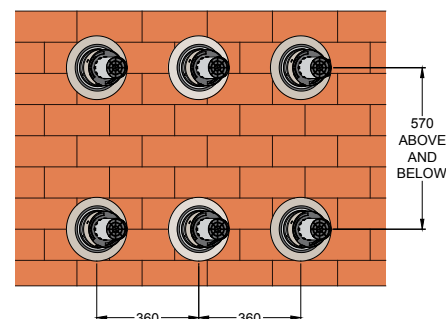
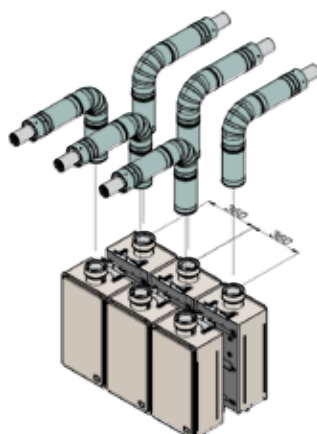
Figure 5

Where a condensate drain and trap are installed, the trap must be inspected regularly to ensure that fluid is maintained in the trap.

MULTIPLE WATER HEATER FLUE INSTALLATION

HERE'S A GUIDE TO INSTALLING MULTIPLE FLUE COMPONENTS.

- Where multiple water heaters are installed, each water heater must be individually flued to the outside. A common flue system **MUST NOT** be used
- For a multiple unit installation, the water heater is certified for installation with zero clearance between adjacent water heaters. Observe flue terminal clearances from other objects in accordance with AS/NZS 5601.1



NOTE: All flues for multiple water heaters **MUST** terminate horizontally.

MAXIMUM FLUE LENGTHS

The certified flue length is 9m with a maximum of 3 x 90° elbows. The maximum flue length with no elbows can be 13.5m.

Reduce the maximum length by 1.5m for every 90° elbow and by 0.75m for every 45° elbow. The flue system is suitable for through the wall or through the roof termination when used with the horizontal terminal as shown above.

Note: It is theoretically possible to have an odd number of 45° elbows (for example a horizontal terminal installed on a wall that is 45° to the wall to which the CFWH is mounted) and in this instance the equivalent length of the 45° elbow should be added or subtracted as required.

FLUEING THROUGH THE ROOF

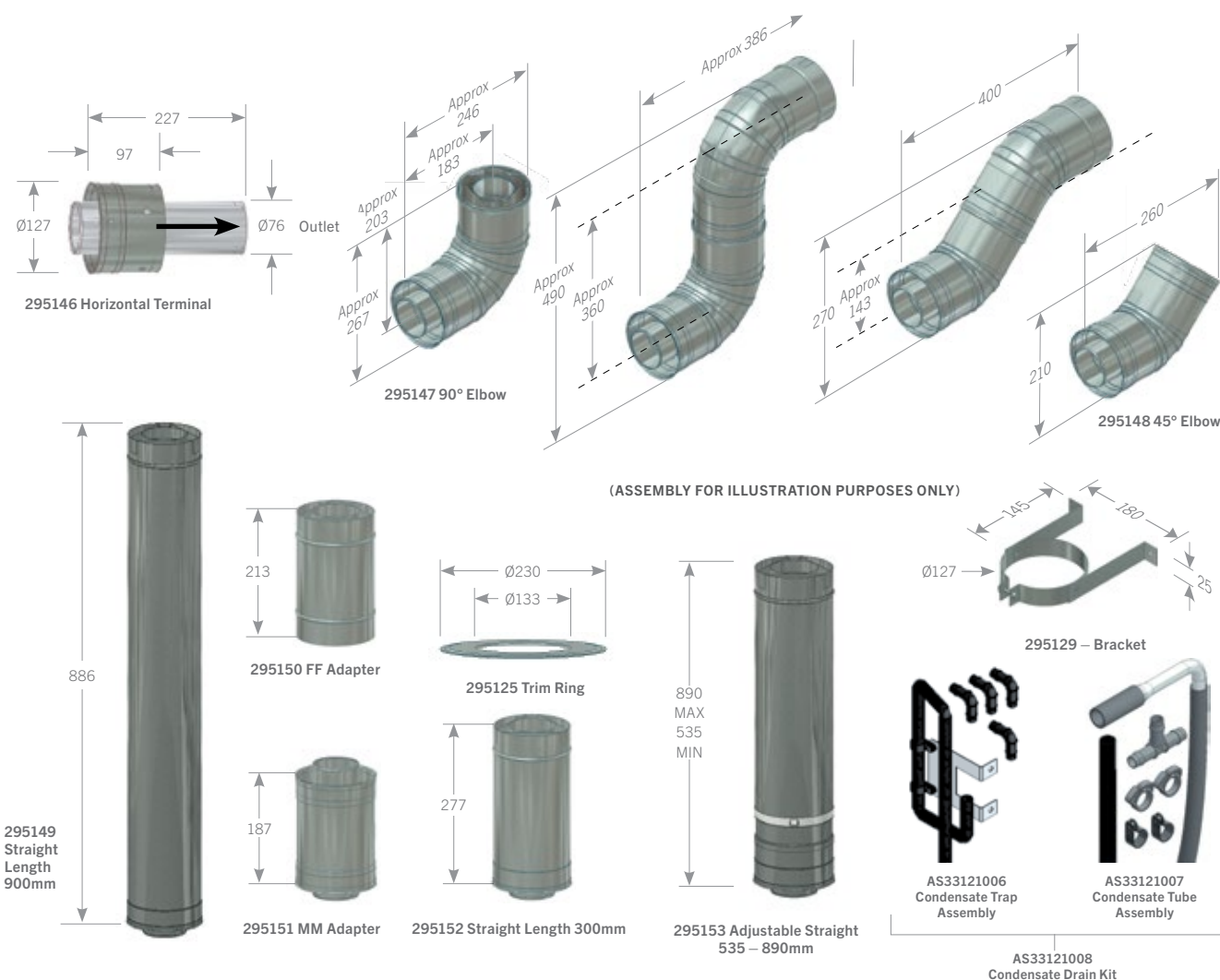
- The minimum side by side centre to centre distance between flue terminals is to be no less than 360mm
- Run the flueing through the roof as dictated by plant room requirements
- Each flue is to be terminated horizontally by using 90° elbows (PN 295147) and horizontal flue terminals (PN 295146)
- The flue terminals for back to back water heaters should be installed 180° opposite to each other as shown

FLUEING THROUGH THE WALL

- The minimum horizontal centre to centre distance between flue terminals is to be no less than 360mm
- The minimum vertical centre to centre distance between flue terminals is to be no less than 570mm

NO. OF 90° ELBOWS	NO. OF 45° ELBOWS	MAXIMUM FLUE LENGTH (m)
0	-	13.5
1	-	12.0
2	-	10.5
3	-	9.0
4	-	7.5
5	-	6.0
-	1	12.75
-	2	12.0
-	3	11.25
-	4	10.5
-	5	9.75
-	6	9.0
-	7	8.25
-	8	7.5
-	9	6.75
-	10	6.0

FLUE COMPONENTS



Use the following table as a guide to selecting Rheem Continuous Flow flue components:

P/N/O	DESCRIPTION	WHERE USED
295146	Horizontal Terminal	Required for all flue terminations
295147	90° Elbow	Maximum of 5 per installation
295148	45° Elbow	Maximum of 10 per installation (with no 90° elbows)
295149	Straight Length 900mm	Long straight sections
295150	Female Female Adapter	Required to reverse flue pipe direction to allow condensate to drain away correctly from water heater in long horizontal sections of horizontally terminating flues
295151	Male Male Adapter	Required to reverse flue pipe direction to allow condensate to drain away correctly from water heater in long horizontal sections of horizontally terminating flues
295125	Trim Ring (optional)	Conceal internal and/or external hole in wall for horizontally terminating flues
295152	Straight Length 300mm	Short straight sections
295153	Adjustable Length 535 – 890mm	Allows to trim flue to exact length required
295129	Bracket	Support flue at intervals not exceeding 2m and after any elbow
AS33121006	Kit Condensate Trap Assembly	One per system for inline or wall mounted. Two per system for B2B
AS33121007	Kit Condensate Tube Assembly	One required per CFGWH
AS33121008	Kit Condensate Drain	One required for individual CFGWH

CO-AXIAL FLUE SPECIFICATION	MATERIAL/DIAMETER
Inner flue	316 or 444 SS / 75
Outer flue	Aluminised Steel / 125