



## HEAVY DUTY STORAGE GAS

### Dependability

The Rheem heavy duty gas range is the work horse of the industry having proved itself over many years of performance in all types of applications.

Our water heaters have a range of individual features, and they're available in indoor and outdoor models.

Rheem's Equa-Flow® system means there's enough flexibility to suit most water heating applications.

Controls are easy to set or adjust, and include several key performance and safety features.

### Quality

High quality is one reason for Rheem's reputation with the experts.

Take the Rheem storage cylinder: it's made from a special grade of steel and lined with a double coat of vitreous enamel which is better suited to a wider variety of water conditions. And multiple anodes provide greater protection.

It's where reliability starts.

### Special features

- Hot Surface Ignition (HSI), which removes the need for a pilot light, lowers operating costs and makes Rheem more reliable. There's also a 100% flame failure control built in
- Multi-Fin flue tube technology for ultra high performance, providing greater thermal input and better thermal efficiency in less space
- Flue damper (on the 621 275) to close off the primary flue when the burner is not operating, reducing maintenance rates by up to 60% when compared to AGA maximum allowance
- Electronic thermostat providing fine temperature control with digital setting display
- Room-sealed flueing option eliminates the need for fan assistance or mechanical ventilation and power flue terminal connections simplify wiring
- A bank of 8 x 621 275 or 631 275 Rheem commercial gas water heaters can deliver 7720 litres of hot water in the first hour

- A multiple manifold installation may be used when more than 8 water heaters or storage tanks are required
- Rheem commercial water heaters can be controlled by a remote device, such as a time clock or a remote isolating switch

### Warranty\*

- 5 year on the cylinder
- 1 year parts and labour on remainder

\* **Conditions apply:** For full terms and conditions please contact Rheem or see Owner's Guide and Installation Instructions, available at [www.rheem.com.au](http://www.rheem.com.au)

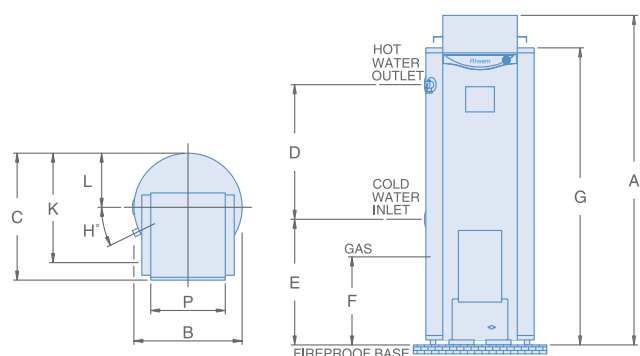


Rheem Multi-fin flue.

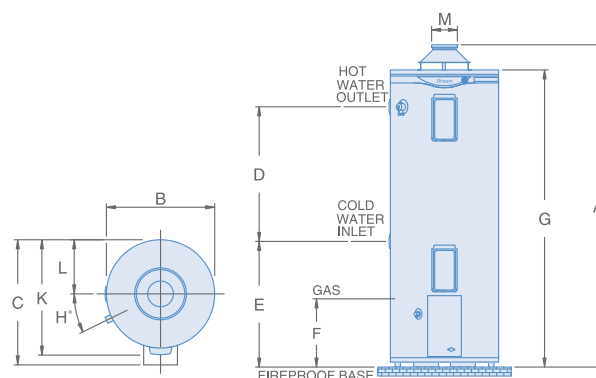
DIMENSIONS AND TECHNICAL DATA TABLE			OUTDOOR MODELS			INDOOR MODELS		
Model			630 260 <sup>12</sup>	631 265	631 275	620 260	621 265	621 275
Storage Capacity		litres	260	265	275	260	265	275
Dimensions								
	A	mm	1640	1835	1865	1660	1795	1895
	B	mm	590	610	640	590	610	640
	C	mm	680	710	780	670	750	780
	D	mm	990	750	760	990	750	760
	E	mm	330	700	700	330	700	700
	F	mm	295	380	340	297	380	340
	G	mm	1520	1655	1695	1520	1655	1695
	H	degrees	27	36	36	27	36	36
	K	mm	655	660	722	655	660	722
	L	mm	295	302	320	295	302	320
	M	mm	–	–	–	100	125	200
	P	mm	420	420	320	–	–	–
Weight – Empty		kg	106	132	197	98	129	187
Inlet/Outlet Connections (BSPF)			RP1¼	RP1¼	RP1¼	RP1¼	RP1¼	RP1¼
Gas Connection (BSPF)			RP½	RP¾	RP¾	RP½	RP¾	RP¾
T&PR Valve Connection (BSPF)			RP¾	RP¾	RP¾	RP¾	RP¾	RP¾
T&PR Valve Setting		kPa	1000	1000	1000	1000	1000	1000
Expansion Control Valve (ECV) <sup>11</sup> Setting		kPa	850	850	850	850	850	850
Max. Water Supply Pressure								
without ECV <sup>11</sup> fitted		kPa	800	800	800	800	800	800
with ECV <sup>11</sup> fitted		kPa	680	680	680	680	680	680
Max. Thermostat Setting		°C	65	82	82	65	82	82
Factory Thermostat Setting		°C	60	70	70	60	70	70
Min. Thermostat Setting		°C	off	60	60	off	60	60
Manifold – Min. Centre to Centre		mm	920	920	890	845	860	890
Electrical Connection			–	2m 10A Plug and Lead		–	2m 10A Plug and Lead	
Electrical Rating 240V 50Hz			–	150 Watts	250 Watts	–	150 Watts	150 Watts
				0.65 Amps	1.1 Amps		0.65 Amps	0.65 Amps
Maintenance Rate		MJ/day	30.7	42.7	50.7	33.9	53.3	26.1

<sup>11</sup> Expansion control valve not supplied with water heater.

Outdoor Models



Indoor Models



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## PERFORMANCE DATA

Model	No. of Units in Parallel	Initial Storage Capacity (Litres)	Thermal Input (MJ/h)	Litres hot water at 50°C rise over peak period (based on natural gas)					
				1 hour	2 hours	3 hours	4 hours	6 hours	8 hours
620 260 & 630 260 <sup>12</sup>	1	260	51	380	570	760	950	1330	1700
	2	520	102	770	1140	1520	1900	2650	3410
	3	780	153	1150	1720	2280	2850	3980	5110
621 265 & 631 265	1	265	110	620	1030	1440	1850	2670	3490
	2	530	220	1240	2060	2880	3700	5340	6980
	3	795	330	1870	3100	4330	5560	8010	10470
621 275 & 631 275	1	275	200	970	1710	2460	3200	4690	6180
	2	550	400	1930	3420	4910	6400	9380	12370
	3	825	600	2900	5130	7370	9600	14080	18550
	4	1100	800	3860	6840	9820	12810	18770	24730
	5	1375	1000	4830	8550	12280	16010	23460	30910
	6	1650	1200	5790	10260	14740	19210	28150	37100
Model	No. of Units in Parallel	Initial Storage Capacity (Litres)	Thermal Input (MJ/h)	Litres hot water at 65°C rise over peak period (based on natural gas)					
				1 hour	2 hours	3 hours	4 hours	6 hours	8 hours
621 265 & 631 265	1	265	110	530	840	1160	1470	2100	2730
	2	530	220	1050	1690	2320	2950	4210	5470
	3	795	330	1580	2530	3470	4420	6310	8200
621 275 & 631 275	1	275	200	790	1370	1940	2510	3660	4810
	2	550	400	1590	2730	3880	5030	7320	9610
	3	825	600	2380	4100	5820	7540	10980	14420
	4	1100	800	3170	5470	7760	10050	14640	19230
	5	1375	1000	3970	6830	9700	12570	18300	24030
	6	1650	1200	4760	8200	11640	15080	21960	28840

Note: Hot water figures rounded to the nearest 10 litres.

## Operations at temperatures above 80°C

Rheem commercial gas models 621 265, 631 265, 621 275, 631 275 are designed to operate at temperatures up to 82°C for sanitising and other applications.

Where the water supplied by the water heater is required consistently

at any temperature above 80°C, we strongly recommend you use a pumped recirculation system. (Please refer to the Equa-Flow® section.)

## Gas pipe supply

The gas supply piping should be sized in accordance with AS/NZS 5601.1.

The gas supply pipe must be sized so that the minimum gas pressure is

available at the inlet to each water heater when all appliances are operating at maximum gas consumption.

The minimum gas pressures are 1.13 kPa for natural and SNG, 2.75 kPa for propane and butane and 0.75 kPa for town gas and TLP.

## TECHNICAL GAS PERFORMANCE DETAILS

Model		620 260 & 630 260 <sup>12</sup>		621 265 & 631 265			621 275 & 631 275		
Gas Type		Nat/SNG	Propane	Nat/SNG	Propane	Butane	Nat/SNG	Propane	Butane
Thermal Input	MJ/h	51	51	110	100	95	200	190	160
Output	kW	11.0	11.0	23.8	21.7	20.6	43.3	41.2	34.7
Min. Gas Supply Pressure	kPa	1.13	2.75	1.13	2.75	2.75	1.13	2.75	2.75
Test Point Pressure	kPa	1.00	2.70	0.85	2.50	2.50	0.90	2.65	2.65
Max. Gas Supply Pressure	kPa	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Litres Recovery Per Hour at Rise of	20°C	480	480	1030	940	890	1870	1780	1500
	30°C	320	320	690	630	600	1250	1190	1000
	40°C	240	240	520	470	450	940	890	750
	50°C	190	190	410	380	360	750	710	600
	60°C	160	160	350	320	300	630	600	500
	65°C	150	150	320	290	280	580	550	460
	70°C	140	140	300	270	260	540	510	430
	75°C	130	130	280	250	240	500	480	400

<sup>12</sup> 630260 not available in butane

Note: Recovery figures rounded to the nearest 10 litres.

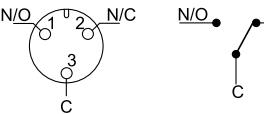
# HEAVY DUTY GAS BMS INTERFACE MODULE

The Rheem Heavy Duty Gas BMS interface module is designed to interface between individual gas water heaters and the building management system to remotely provide facility managers with real time water heater status.

## Features

- The module mounts to the outside of the water heater and is provided with Common, N/O and N/C contacts for field connection by on site trades
- Suits models 621265, 621275, 631265, 631275
- Provides Run/Fail signal via voltage free contacts (common, N/O, N/C)
- Contact rating 1A @ 48V
- Uses water heater's own power supply
- Suitable for indoor and outdoor installation – IP34

- On board LED status
- Suitable for new installations or retrofit to existing heaters
- Dimensions (mm): 231(h) x 112 (w) x 78 (d)
- **Order Code: 299239**

INDICATOR CODE	
GREEN	Normal Operation (Relay Energised)
RED OR NO INDICATION	Attention Required (Relay de-energised)
Voltage Free Contact Load: Max 1A, 48V	
	



## Solve several problems with room sealed flueing

The Rheem model 631 275 can be installed inside a plant room as part of a room sealed installation, using the Rheem Room Sealed Balanced Flue kit, P/No 299135.

This is the ideal solution for a difficult installation, because it solves several problems.

Ventilation into the plant room is not required and there is no need for fan assistance when discharging flue products horizontally.

Nor is there a need to run a flue to a satisfactory vertical discharge point (usually at the top of the building).

The Room Sealed Kit is designed to enable flue products to be discharged up to 3 metres total flue discharge length from the water heater. It can incorporate up to 3 x 90° bends.

Interconnecting nominal 150mm inlet

air and flue ducting should be supplied by the installing plumber.

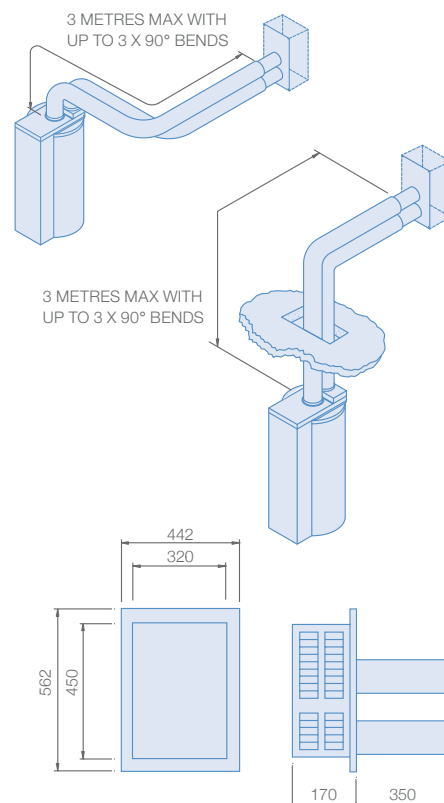
The kit includes transition pieces, which are designed to accept twin skin flue tubes.

The Room Sealed Balanced Flue kit can be fully installed from within the plant room.

It's suitable for walls up to a maximum thickness of 300mm, and it reuses the balanced flue from the water heater by relocating it on the external wall of the plant room.

A minimum plant room height of 2400mm is required, and the minimum clearances required for balanced flue terminals (as stated in AS/NZS 5601.1) must be observed.

This includes a minimum of 500mm between balanced flue terminals for this model.



# HEAVY DUTY STORAGE GAS

## Ventilation for indoor gas water heaters

In Australia and New Zealand, gas water heaters installed indoors (non room sealed) require to be ventilated in accordance with AS5601 or AS/NZS 5601.1 depending on the local regulations

AS/NZS 5601.1 also has further requirements regarding compliance of mechanical ventilation.

Please consult the appropriate standard when designing plant room ventilation requirements.

### Notes

1. Although a room sealed water heater installation draws the air required for combustion from outside, ventilation may be necessary to prevent a rise in the ambient temperature in the room.
2. In plant rooms, wherever possible

more than one wall should be used to provide ventilation. This allows a flow of air across the room and helps prevent excessive temperatures in the room.

3. In rooms other than plant rooms, ventilation is required if the total thermal input of the water heaters exceeds 3 MJ/h per cubic metre of room volume.

## Power flueing / Mechanical ventilation

You can either install an individual Rheem gas model or a bank of multiple 621 265, 621 275 models with a power flue or mechanical air supply.

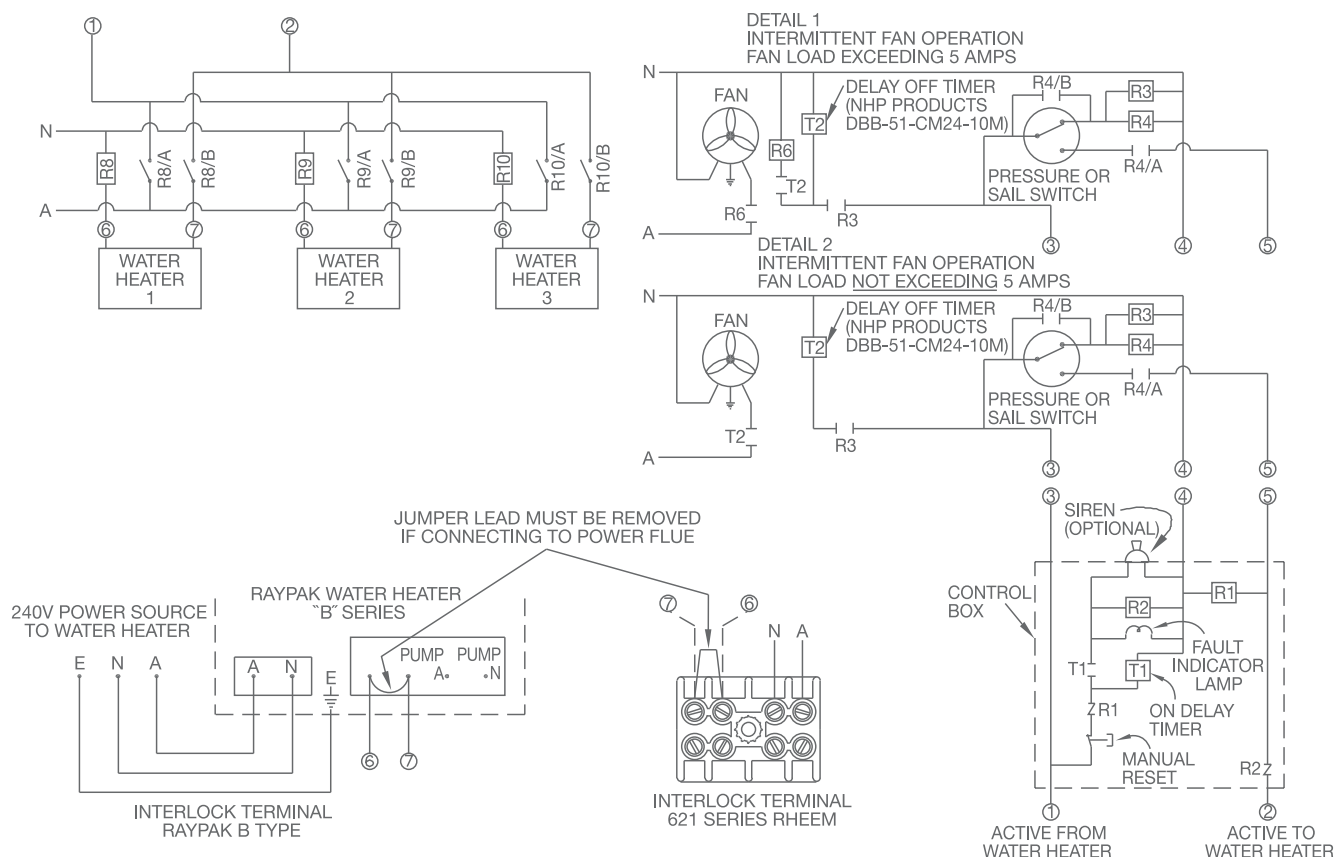
It's essential to prove the flue system operates correctly before the main burner is allowed to operate.

How is this achieved? A self proving relay interconnected with either a vane switch or pressure differential switch will prove both air flow and functionality of the control circuit before ignition of the main burner.

Please refer to AS/NZS 5601.1 for full details of what's required.

For multiple installations, the operating principle is the same as for a single water heater.

Any water heater can switch on the fan, and the burners can only come on when the sail switch is closed.



Intermittent PowerFlue Fan Control - Multiple Water Heater Rheem 621 Series & Raypak Type B Series.



## Power Flue and Remote control

Rheem commercial models 621 265, 631 265, 621 275, 631 275 may be controlled by a remote device such as a time clock, remote isolating switch, pressure switch or sail switch. Additionally, Rheem can assist with Power Flue design solutions for Rheem and Raypak® commercial gas water heaters. For further details please contact your local Rheem technical advisory service.

## Flueing: minimum distances for outdoor gas water heaters

Rheem outdoor gas water heaters have a balanced flue and do not require the addition of secondary flueing. Minimum clearance requirements, as stated in AS/NZS 5601.1, apply to the location of outdoor balanced flue, room sealed or power flue terminals.

The Standard also states that where a balanced flue or room sealed terminal is installed under a covered area, then the covered area is to be open on at least two sides and the terminal is to be located to ensure a free flow of air across the terminal.

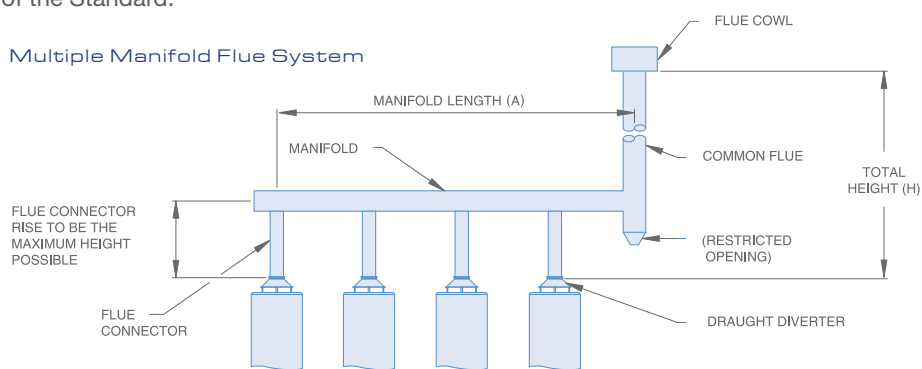
**Additionally Rheem requires the water heater be installed with the back of the unit against a wall or alternatively against a solid fireproof screen extending at least 500mm above, below and either side of the flue terminal.**

## Flueing: indoor gas water heaters

**⚠ Rheem indoor gas water heaters are designed for connection to a flue system in accordance with the requirements of AS/NZS 5601.1.**

Manifolded water heaters can either be flued individually or connected to a common flue. The design of the flue must comply with Appendix H of the Standard.

### Multiple Manifold Flue System



NOTE: THE LENGTH OF MANIFOLD "A" SHOULD NOT EXCEED 50% OF TOTAL FLUE HEIGHT "H"

**⚠ Appropriate authorities should be consulted before any work is commenced on flues other than single appliance flues.**

## FLUE SIZING FOR GAS WATER HEATERS

Model	Total Flue Height (H) (m)	1		2		4		6		8	
		Max. Lateral (m)	Flue Dia (mm)	Max. Manifold Length (A) (m)	Flue Dia (mm)	Max. Manifold Length (A) (m)	Flue Dia (mm)	Max. Manifold Length (A) (m)	Flue Dia (mm)	Max. Manifold Length (A) (m)	Flue Dia (mm)
620 260	2	1.0	100	1.0	125	—	—	—	—	—	—
51 MJ/h	3	1.5	100	1.5	125	—	—	—	—	—	—
	6	3.0	100	3.0	125	3.0	150	—	—	—	—
	12	6.0	100	6.0	100	6.0	150	6.0	175	—	—
	24	7.6	150	12.0	150	12.0	150	12.0	150	12.0	175
621 265	2	1.0	150	1.0	200	—	—	—	—	—	—
110 MJ/h	3	1.5	125	1.5	175	—	—	—	—	—	—
	6	3.0	125	3.0	150	3.0	200	—	—	—	—
	12	6.0	125	6.0	150	6.0	200	6.0	250	—	—
	24	7.6	150	12.0	150	12.0	175	12.0	250	12.0	250
621 275	2	1.0	175	1.0	250	—	—	—	—	—	—
200 MJ/h	3	1.5	175	1.5	250	—	—	—	—	—	—
	6	3.0	150	3.0	200	3.0	300	—	—	—	—
	12	6.0	150	6.0	200	6.0	250	6.0	300	—	—
	24	7.6	150	12.0	175	12.0	250	12.0	300	12.0	300

### Notes:

- The table is based on a natural draft system with an insulated type flue or a flue installed indoors
- The table is extracted from the Flue Tables in AS/NZS 5601.1 and is meant as a quick guide only. Any variations should be referenced from AS/NZS 5601.1