Ember Series
Specification guide

Rinnai

Important

Rinnai is constantly improving its products, and as such, information and specifications are subject to change without notice. For the most up-to-date information, go to www.rinnai.co.nz.

Help is here
For more information about buying, using, and servicing of Rinnai appliances call 0800 RINNAI (0800 746 624).

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Contents

The Ember Series

Designed and made in New Zealand

The Ember Series are small gas fires with compact dimensions suitable for new builds and renovations. The Ember fires are available in two sizes and deliver over 5 kW of heat.

With stunning burn media options, large viewable flame area, and multiple frame choices to suit.

The Ember fires are suitable for retrofitting into existing masonry installations, and also for new builds into mock chimneys. Ideal for open plan areas and living rooms. As a sealed appliance, it can also be installed in larger bedrooms as long as this meets the 6.10.6.1 requirements of AS/NZS 5601.1. Consult your local licensed gasfitter for advice on where it can be installed.

Simple control
Sometimes less is more, which is why we've designed this fire to be controlled with a simple IR remote that controls flame height and fan speed. If you want more options such as full thermostatic control and timers, the Wi-Fi module kit can be purchased as an accessory.

Ember Series

Ember 600 / 700 specification summary

Designed and made in New Zealand.

A direct vent (room sealed) inbuilt gas fireplace with glass front and convection fan, pushing warm air from the top of the appliance. Operated using a simple IR remote to control flame height and fan speed, or by the Rinnai Wi-Fi app (optional accessory) that allows full thermostatic control, as well as other features such as timers.

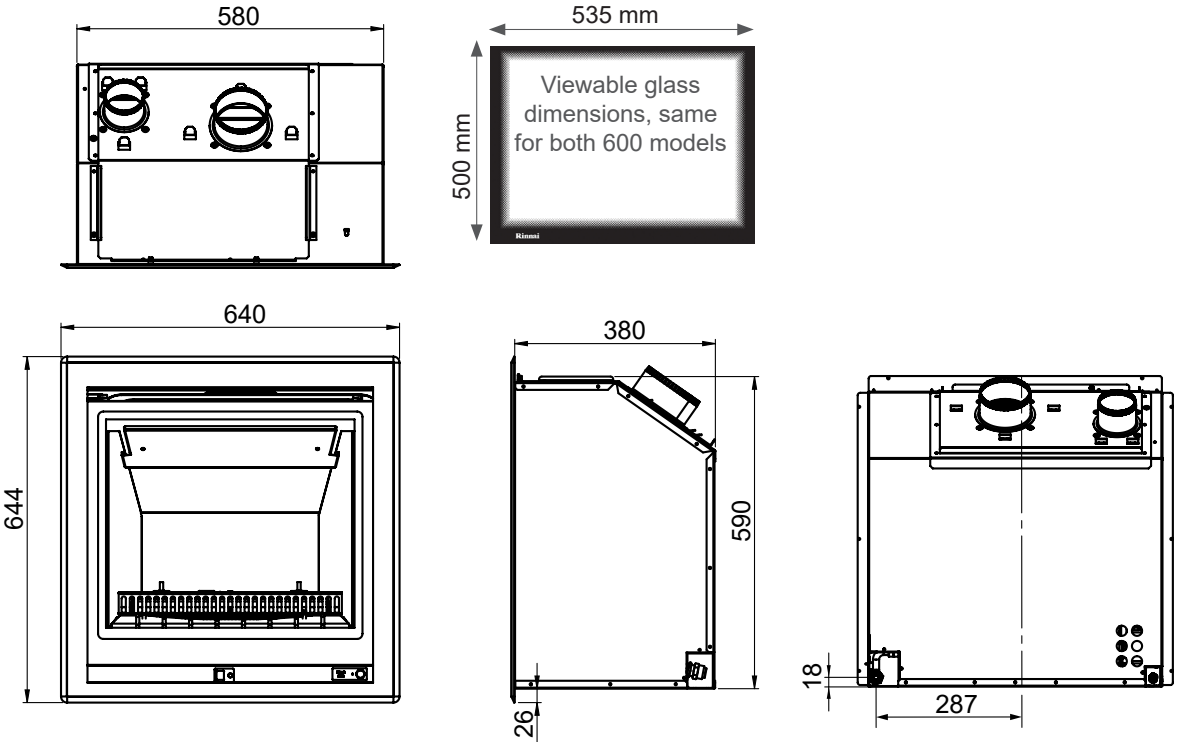
	600	**700**
Input	12-23 MJ/h	14-27 MJ/h
Output[1]	2.5-5.0 kW	3.0-6.0 kW
Efficiency	77% on high	77% on high
Heating area[2]	up to 80 m^2	up to 96 m^2
Gas type	NG or ULPG	NG or ULPG

[1] Will vary according to gas type and flue configuration
[2] Will vary according to location in NZ

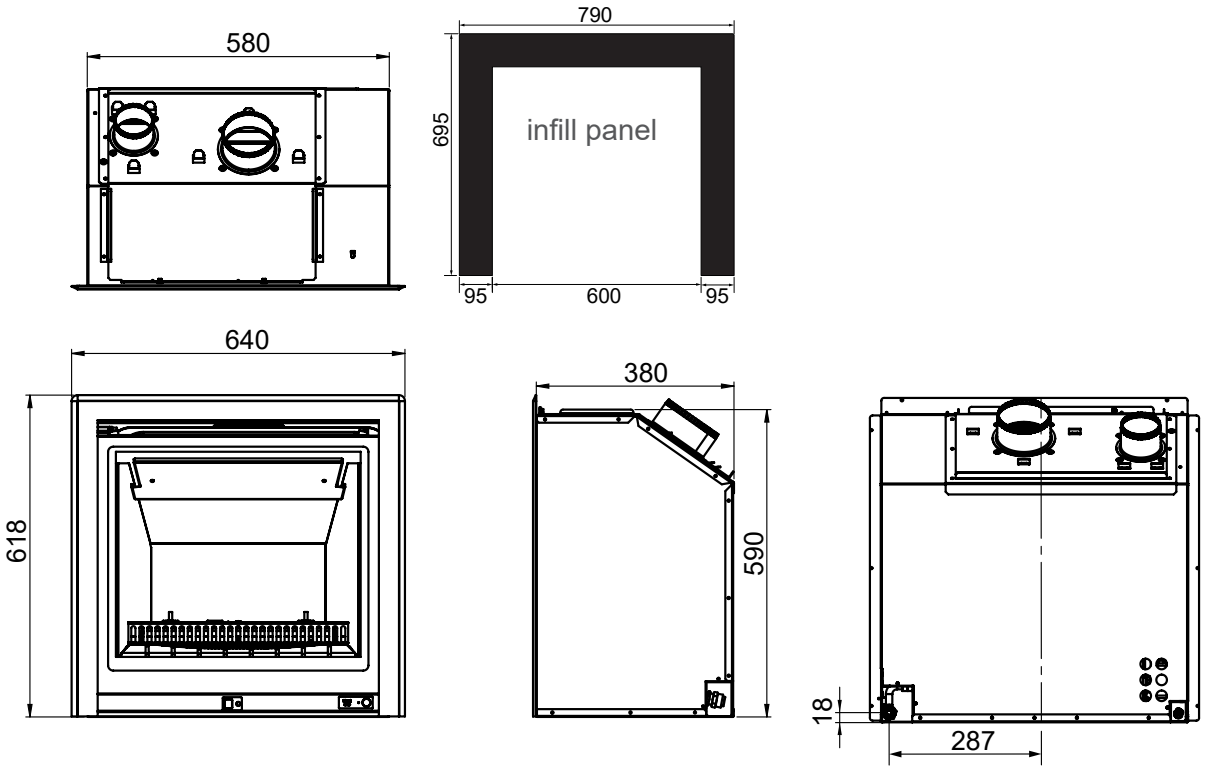
Suitability	Suitable for masonry installations and installations into a mock chimney in open plan areas and living rooms. As a room sealed appliance it can also be installed in larger bedrooms as long as this meets the 6.10.6.1 requirements of AS/NZS 5601.1.
Date plate	Lower right hand side of the base panel in front of the gas control
Convection fan	120 V AC 50 Hz 2-speed centrifugal blower
Lighting	2 x halogen lamps 240 V, 25 W
Gas connection	Brass ½ " BSPT male fitting. Gas supply terminates inside the heater, lower right hand side of appliance.
Noise level	37 - 45 dB(A)
Flueing - masonry	Appliance must be installed with a Rinnai Ember DV flue system. Colinear flexi flue, air intake Ø75 mm, exhaust Ø100 mm For masonry installations, the chimney cavity needs to be at least 200 x 200 mm in order to fit the colinear flexi flue.
Flueing - mock chimney	Appliance must be installed with a Rinnai Ember DV flue system. Colinear (air intake Ø 75 mm, exhaust Ø 100 mm) to coaxial direct vent flueing (inner Ø 100 mm, outer Ø 170 mm).
Electrical	230-240 V AC 50 Hz. The Ember has a 1.5 m power cord with a 3-pin plug supplied. The power cord passes through a slot in the back right hand corner of the appliance. • High - 110 W • Standby - <1W
Safety devices	Flame failure sensing system, pressure relief, overheat safety switch, air temperature sensor, thermal fuse, overcurrent fuse, and spark detector.
Temperature control	Operated by using the basic infra-red remote*, or for more features, such as timers and thermostatic control, using Rinnai's Wi-Fi fireplace controller app. * Temperature sensor is located in the bottom of the remote
Weights	• Ember 600 - 51 kg • Ember 700 - 55 kg

Ember 600 dimensions (mm)

Ember 600 with 4-sided frame (mock chimney installations)

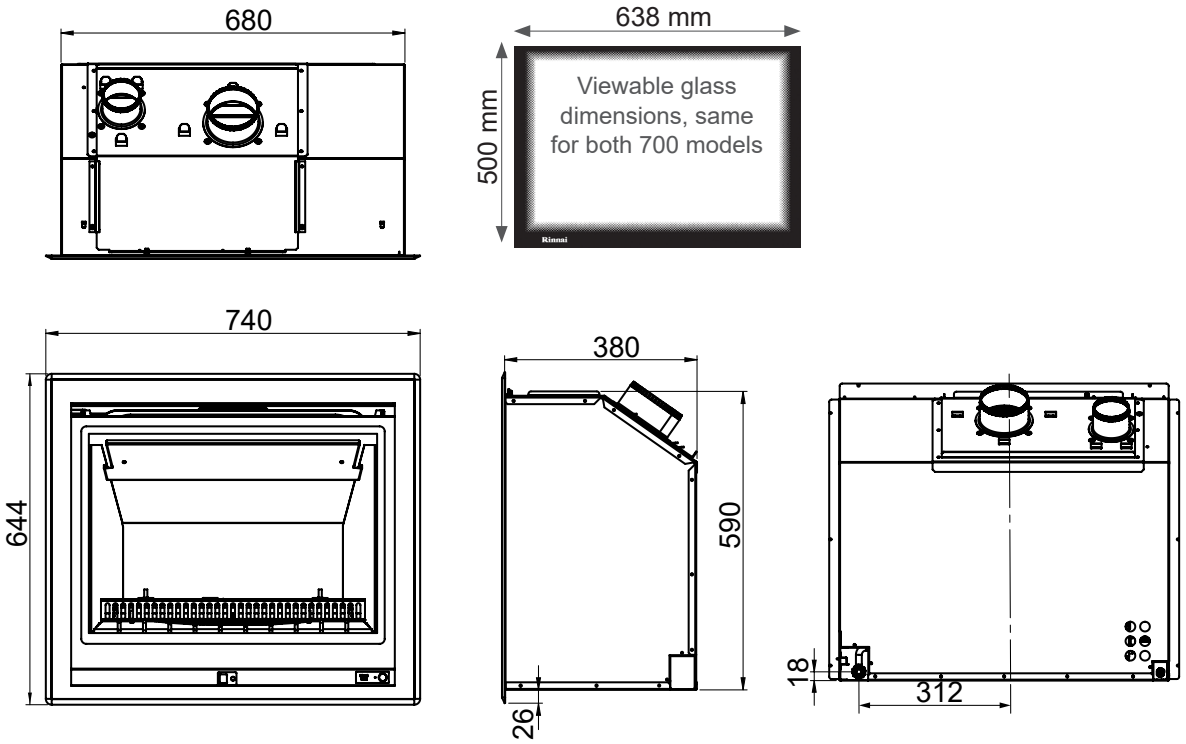


Ember 600 with 3-sided frame (masonry installations or mock chimney installations with a hearth)

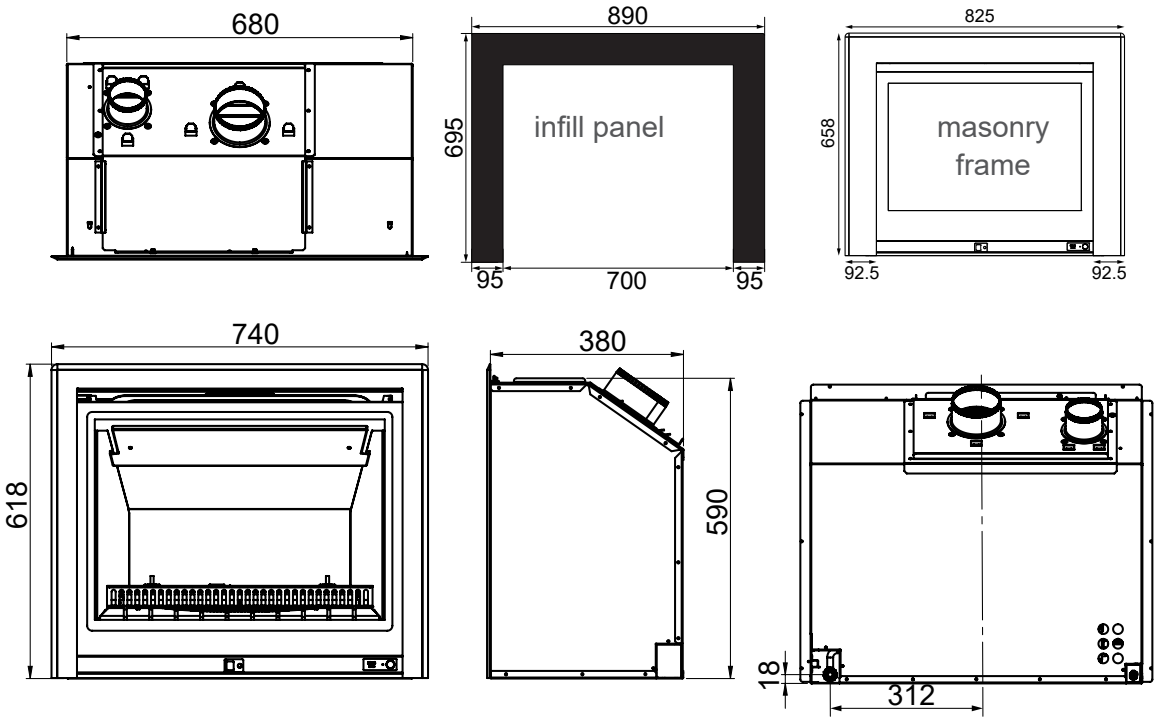


Ember 700 dimensions (mm)

Ember 700 with 4-sided frame (mock chimney installations)



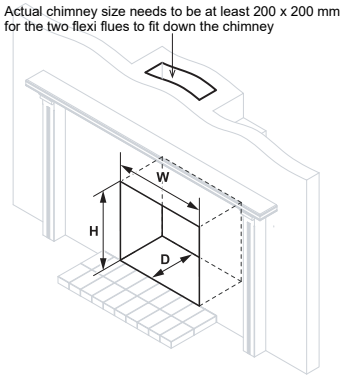
Ember 700 with 3-sided frame (masonry installations or mock chimney installations with a hearth)



Ember enclosure dimensions

The Ember must be positioned within the enclosure on a flat level surface that allows free movement of the appliance. The enclosure must be capable of supporting 1.5 times the weight of the Ember.

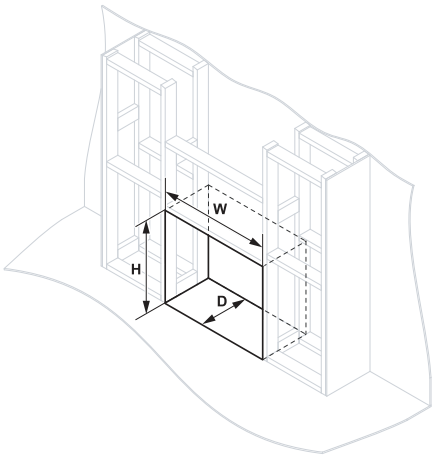
Masonry



	600	700
W-width	600 mm	700 mm
Infill panel*	600-750 mm	700-850 mm
Masonry frame*	N/A	700-785 mm
H-height	600 mm	600 mm
Infill panel*	600-675 mm	600-675 mm
Masonry frame*	N/A	600-638 mm
D-depth	400 mm min.	400 mm min.

* Enclosure dimensions can be larger if using an infill panel or a masonry frame.

Mock chimney



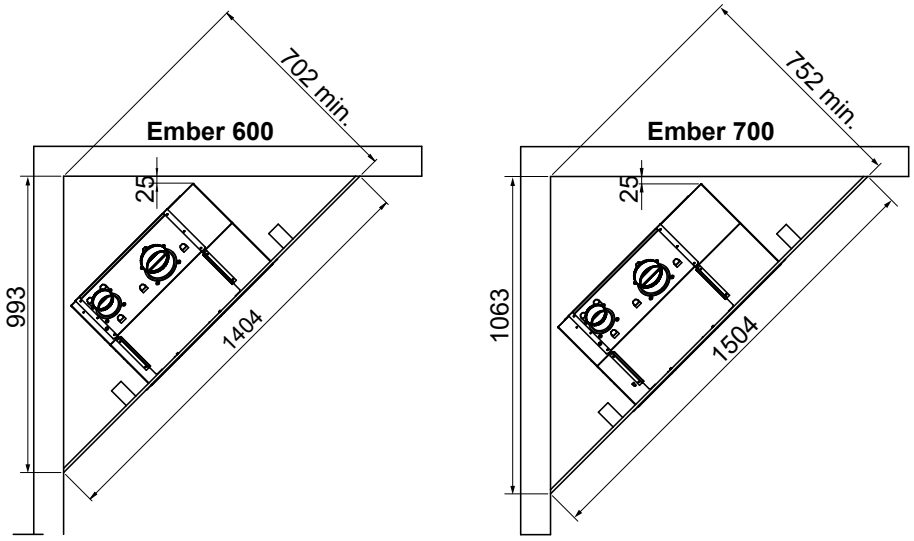
	600	700
W-width	700 mm	800 mm
H-height	700 mm	700 mm
D-depth	400 mm min.	400 mm min.

Framing dimensions above are before the zero clearance frame is fitted.

For mock chimney installations the Ember MUST BE installed with the Ember Zero Clearance frame, which gives the required clearances to combustibles.

Please note
If installing the Rinnai Ember into a purpose built chimney breast or chase, which is not open to the roof space of the building, you will need to add cavity vents. Refer to the installation guide for more information.

Corner installations

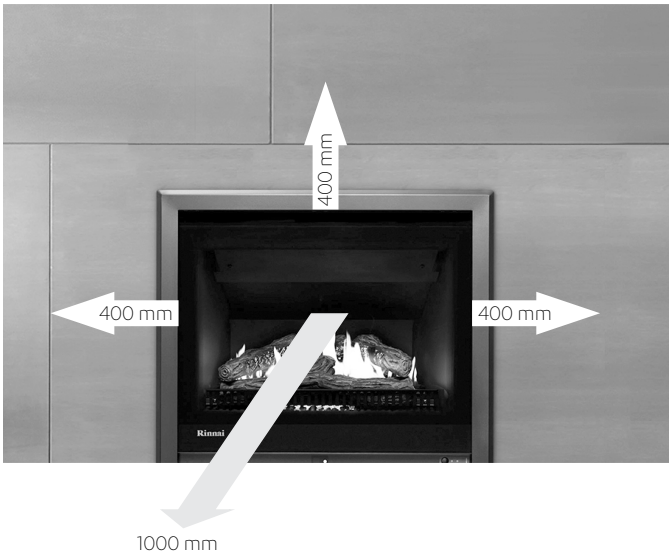


Ember clearances from combustibles

The clearances listed below, measured from the edge of the glass, are minimum clearances unless otherwise stated.

While the heater is operating

The appliance must not be installed where curtains or other combustible materials could come into contact with the heater. The 400 mm side clearance includes side walls. The 1000 mm clearance is in front of the fire.

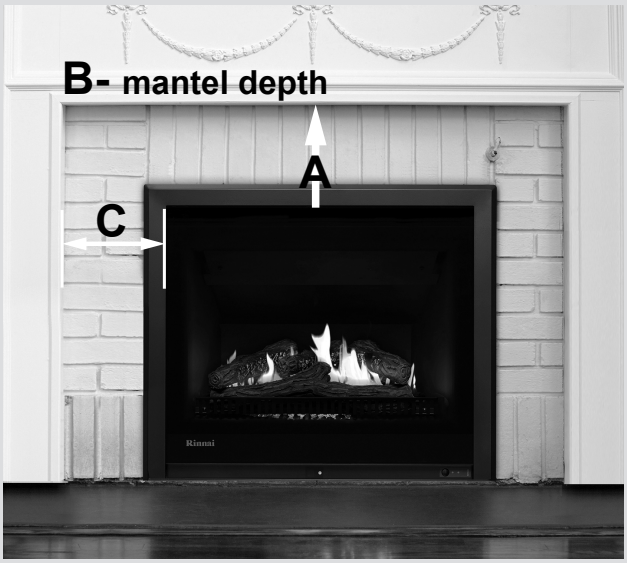


Floor protection

Heat from this fire may over time affect the appearance of some materials used for flooring, such as, carpet, vinyl, cork or timber. To avoid this occurring, it is recommended that a mat be placed in front of the appliance.

Mantels and surrounds

Combustible mantels and surrounds require clearance from the unit to minimise the risk of fire. Mantels and surrounds, made of combustible materials such as wood, are allowed providing they are outside the minimum clearances shown.



A	Mantel needs to be a min. of 400 mm away from the edge of the glass.
B	Max. mantel depth at 400 mm (A) is 250 mm max.
C	Surround needs to be a minimum of 400 mm away from the edge of the glass.

For every 50 mm of added mantel depth there must be an additional 100 mm of clearance from the edge of the glass. For example:

MANTEL DEPTH	A: CLEARANCE REQUIRED
300 mm	500 mm
350 mm	600 mm
400 mm	700 mm

Hearths

A hearth is not necessary but can be used for decorative purposes or protection of sensitive flooring if required. A hearth must not obscure the front of the fire or obstruct the fire in any way (including the frame around the fire).

Wall surface above the fire

The temperature of the wall surface directly above the fire may get warm and distort paint finishes, or distort vinyl wall coverings. For durability of surfaces, please contact the manufacturer for their specification.

Burn media, frames, and optional extras

Log set
Ember 600 R2422
Ember 700 R2420

Ceramic log set, contains five customised logs.

Stone set
Ember 600 R2423 (15 stones)
Ember 700 R2421 (21 stones)

Ceramic stone set.

The Ember 600 and 700 burn media sets cannot be interchanged. The Ember 700 log set is thicker and longer, and the stone set has six more stones. Ensure the correct set is ordered.

3-sided black frame
Ember 600 R2410
Ember 700 R2400

Black powder coated frame for a **masonry** chimney, or a **mock** chimney with a hearth.

3-sided titanium frame
Ember 600 R2412
Ember 700 R2402

Titanium frame for a **masonry** chimney, or a **mock** chimney with a hearth.

4-sided black frame
Ember 600 R2413
Ember 700 R2403

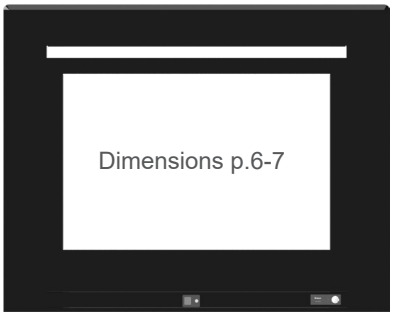
Black powder coated frame for a **mock** chimney.

4-sided titanium frame
Ember 600 R2415
Ember 700 R2405

Titanium frame for a **mock** chimney.

Masonry black infill panel
Ember 600 R2453
Ember 700 R2452

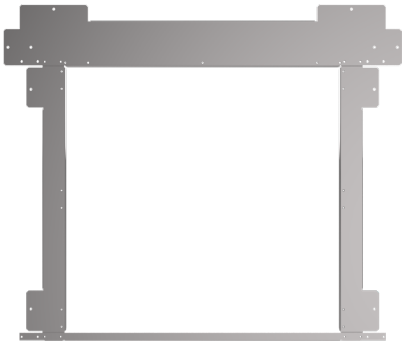
Black powder coated panel for **masonry** installations where the cavity is larger than the unit. The panel will cover up the gap behind the fire and 3-sided frame.



Masonry frame (700 only)
Ember 700 R2406

Black powder coated frame for **700 masonry** installations. Designed to cover a larger cavity opening. Used INSTEAD of the 3-sided frame

i The difference between the infill panel and the masonry frame is aesthetics. The infill panel has a thinner profile and sits behind the 3-sided frame. The masonry panel looks wider and is used INSTEAD of the 3-sided frame.



Ember zero clearance frame
Both models R2450

Mandatory requirement for mock chimney installations, to ensure clearances to combustibles.

Gas fireplace Wi-Fi module
Code: R7000

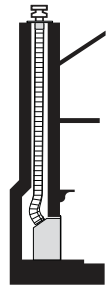
The Wi-Fi module enables the Ember to be connected to the Rinnai wi-fi app for full thermostatic control and functionality.

High Wind vertical cowl protection kit
Code: R3655

Designed to wrap around the existing vertical cowl to reduce wind entering the flue and causing flame disturbances.

Ember flueing options

Installations into a masonry cavity



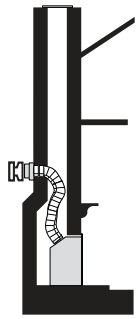
Masonry vertical termination
For installations into a masonry cavity. Check the chimney size before doing anything. It needs to be at least 200 x 200 mm for the flexi flues to fit.

- Minimum flue length is 3 m
- Maximum flue length is 8 m

Flue kit(s)
Masonry chimney flexi vertical flue kit 5.5 m (R3656).

If flueing needs to extend more than 5.5 m, an extension kit is available:

- Masonry chimney flexi flue extension kit 2.5 m (R3657)

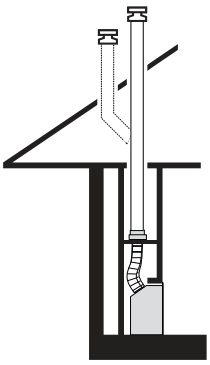


Masonry horizontal termination
For installations into a masonry cavity where the chimney may have been capped. Check the chimney size before doing anything. It needs to be at least 200 x 200 mm for the flexi flues to fit.

- Minimum flue length is 900 mm
- Maximum flue length is 1200 mm=

Flue kit components
- Ember adapter (R3653)
- Masonry horiz. flue box (R2449)
- Horiz. wall terminal (R3650)

Installations into a mock chimney (combustible opening)



Mock chimney vertical terminations
For installations into a combustible opening and using the Ember zero clearance frame. Flue runs in-wall and terminates vertically.

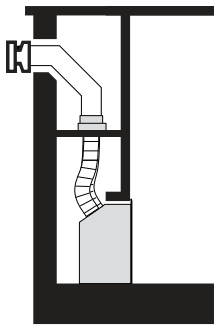
- Direct vertical, max. flue length 8 m
- Vertical with offsets, max flue length 8 m
- Max. number of 45 degree bends - two

If doing a straight short vertical flue (no bends) for a single story, flue kit R3665 3.6 m can be used.

Direct vertical flue components
- Ember adapter (R3653)
- Mock chimney vertical flue kit (R3665)

Vertical with offsets
- Ember adapter (R3653)
- Flue pipes 150-1200 mm*
- Flue extension (if needed)*
- Flue elbow 45° (R3642)
- Roof cowl (R3651)

* Refer p.15 for part numbers



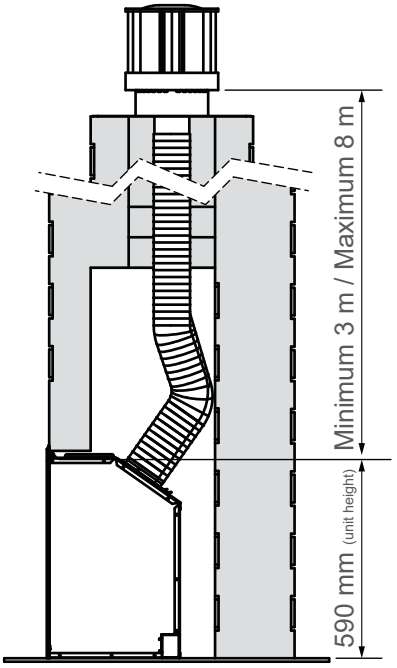
Mock chimney horizontal terminations
For installations into a combustible opening and using the Ember zero clearance frame. Flue runs vertically in-wall and terminates horizontally.

- Minimum flue length is 900 mm
- Maximum flue length is 2 m

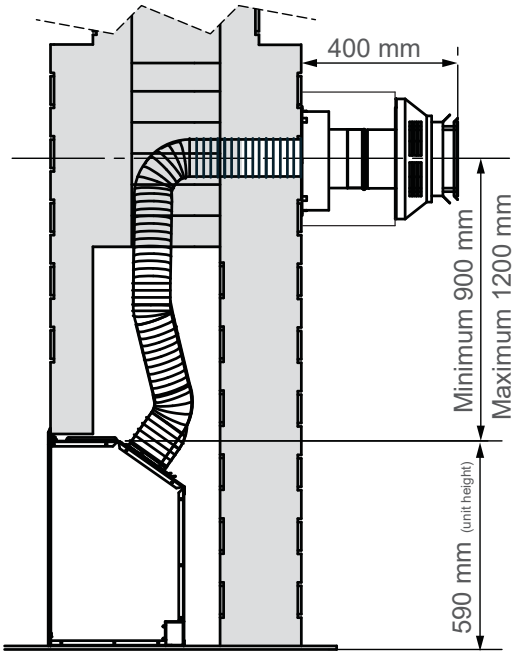
Direct horizontal flue kit
- Ember adapter (R3653)
- Mock chimney horizontal flue kit (R3654)

If going higher then a flue pipe (or two), or flue extension may be needed.

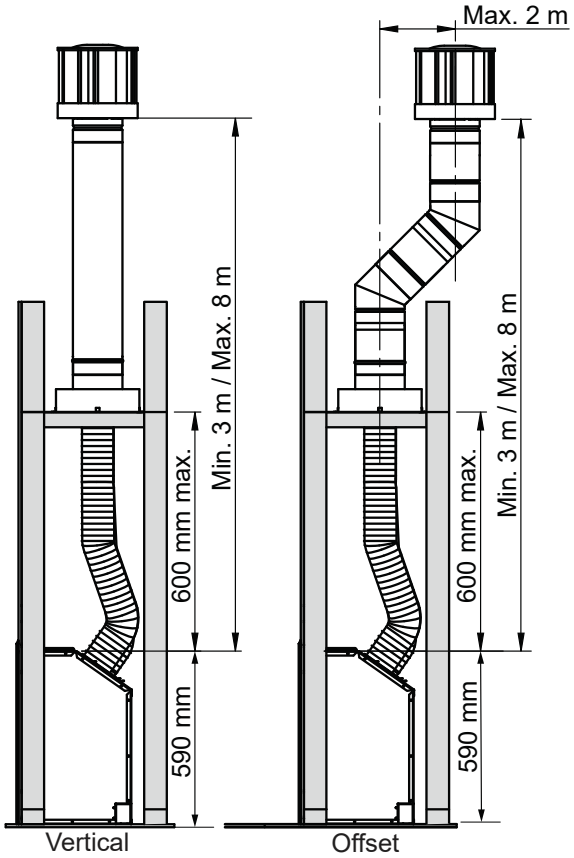
Masonry vertical termination
(for a non-combustible opening only)



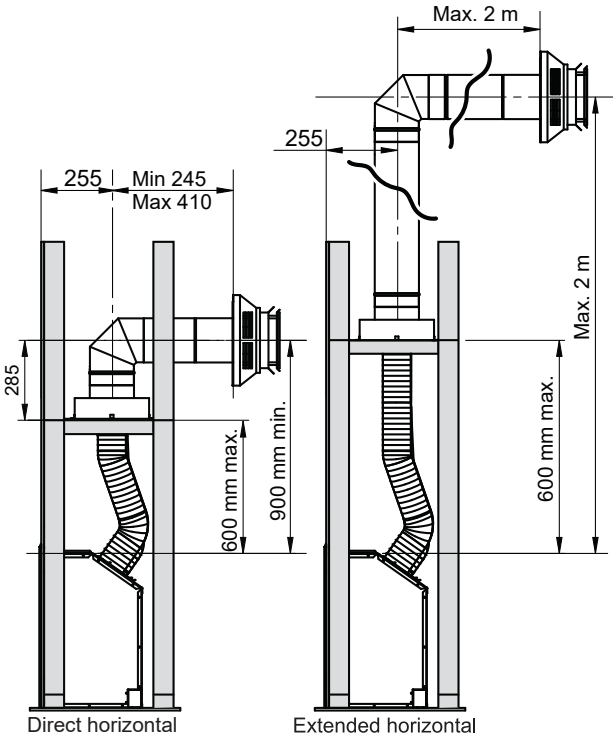
Masonry horizontal termination
(for a non-combustible opening only)



Mock chimney vertical terminations



Mock chimney horiz. terminations

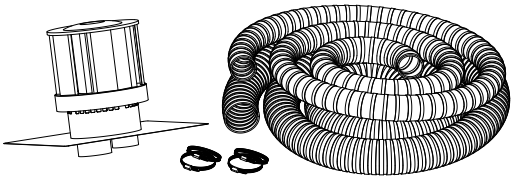


Ember flue kits and components

Masonry vertical flexi flue kit 5.5 m DV R3656

For installations in a masonry fireplace. Extends 5.5 m. If longer flueing is required then the flexi flue extension kit needs to be ordered. Kit includes:

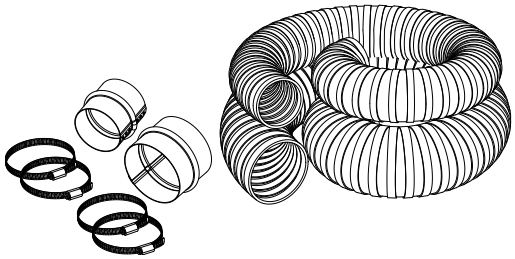
- aluminium colinear roof cowl DV
- chimney plate 455 x 455 mm
- intake flexi Ø75 (LHS)
- exhaust flexi Ø100 (RHS)
- stainless steel flue clamps x 4



Masonry vertical flexi flue ext. kit 2.5 m DV R3657

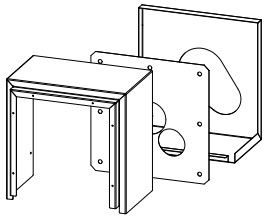
When flueing needs to extend beyond 5.5 m. Kit includes:

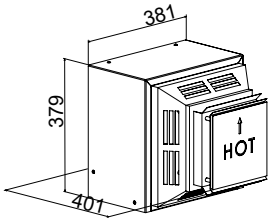
- intake flexi Ø75 (LHS)
- exhaust flexi Ø100 (RHS)
- joiners x 2
- stainless steel flue clamps x 4

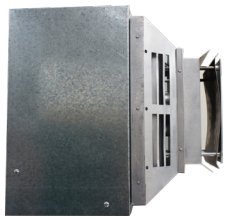


Masonry horizontal flue box R2249

For installations into a masonry cavity where the chimney may have been capped. Refer p.17 for an image of what this looks like installed. Attaches to the horizontal wall terminal (R3650).







Mock chimney vertical flue kit 3.6 m R3665

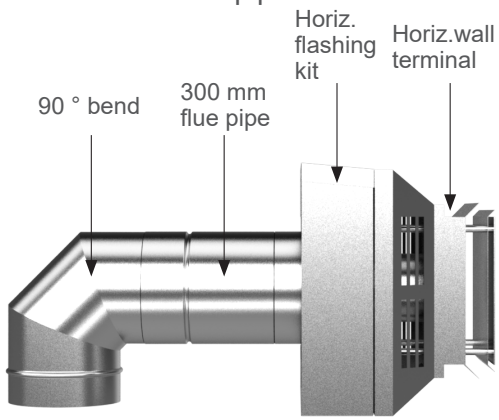
Coaxial vertical flue kit that attaches to the Ember adapter (remember to order this component as well).

Kit includes:
- High wind roof cowl
- Flue pipes 1200 mm x 3
- Wall straps x 2

If longer flueing is required, order additional flue pipes.

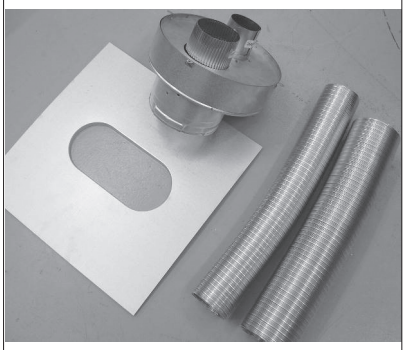
Mock chimney horizontal flue kit R3654

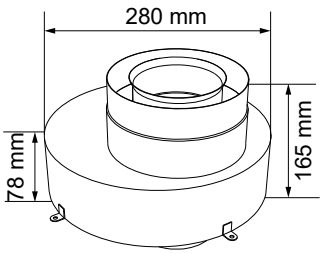
Coaxial horizontal flue kit that attaches to the Ember Adapter. If longer flueing is required, order additional flue pipes.



Ember flue adapter (R3653)
Colinear to coaxial adapter.

Contains; adapter, locating plate (455 x 455 mm), Ø75 mm and Ø100 mm flexi flues, and four flue clamps. Stretches out to 1.2 m.

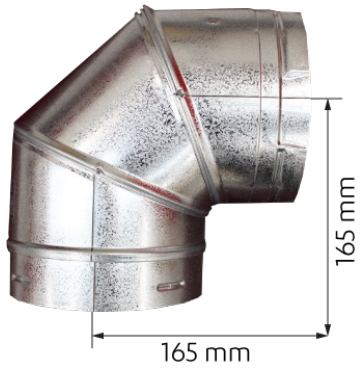




Flue elbow 90° (R3643)
Used to facilitate between vertical and horizontal flueing. Elbow swivels 360 ° at base.

Once joined effective length reduces 35 mm to approx. 130 mm.

Inner - aluminium Ø 100 mm
Outer - galv. steel Ø 170 mm



Flue pipes

150 mm:	R3630
230 mm:	R3631
300 mm:	R3632
450 mm:	R3633
600 mm:	R3634
900 mm:	R3635
1200 mm:	R3636

Pipe used to construct horizontal and vertical flueing. Cannot be cut to size. Once joined nominal length reduces approx. 35 mm.

Inner - aluminium Ø 100 mm
Outer - galv. steel Ø 170 mm

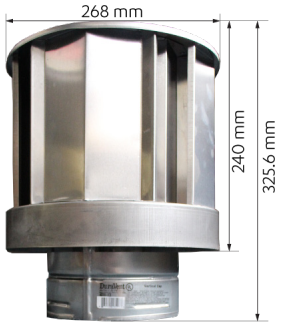
Flue extension

75-175 mm:	R3638
75-360 mm:	R3639

Used for extended straight lengths of flue. Available in two lengths—extending to 175 mm or 360 mm.

Inner - aluminium Ø 100 mm
Outer - galv. steel Ø 170 mm

Roof cowl (R3651)
Aluminium flue terminal required for all vertical flue installations—part of all vertical flue kits.



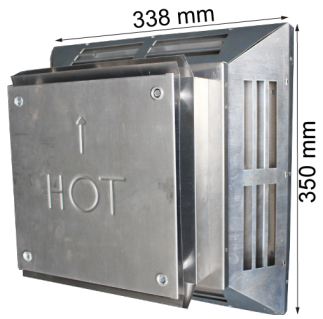
High wind vertical cowl protection kit (R3655)
For windy areas such as Wellington,coastal properties, and elevated properties on hills. Designed to wrap around the vertical cowl to reduce wind entering the flue and causing flame disturbances. It is fitted to the cowl and can be retrofitted.

Construction = stainless steel

Wall strap (R3647)
Adjustable strap used to add lateral support to the flue. Provides a 50-200 mm clearance to combustible walls.

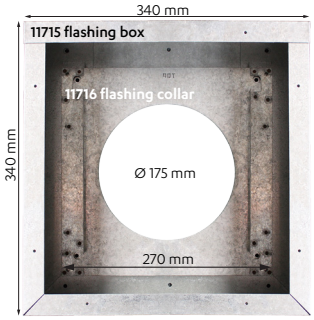
Horizontal wall terminal (R3650)
Aluminium flue terminal required for all horizontal terminations.

Depth with horizontal flashing kit installed—252 mm.



Horizontal flashing kit (R3646)
Flashing components used to join the internal flue to the outside flue. Refer horizontal wall terminal for installed dimensions.

Box depth is 100 mm.



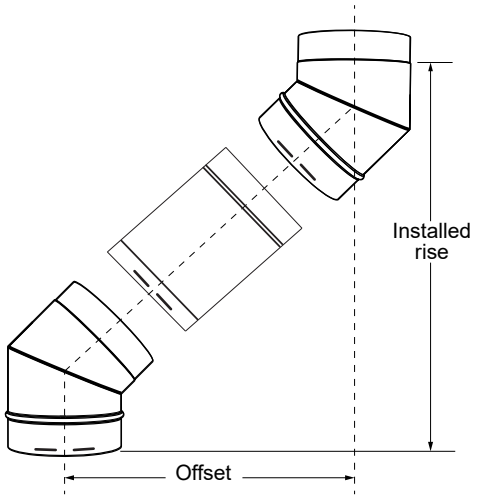
Elbow flue strap (R3644)
Flue support for elbows and offsets.

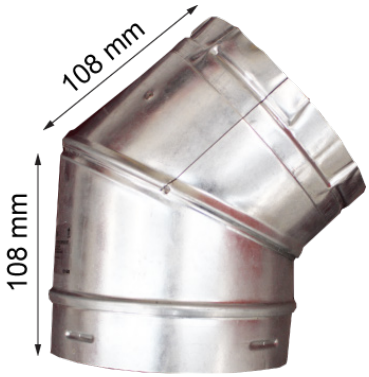
Flue elbow 45° (R3642)
Kit contains two 45° bends.

Offsets obstructions. Elbow swivels 360 ° at base. Angle not adjustable.

Once joined effective length reduces 35 mm to approx. 73 mm.

Inner: Aluminium
Outer: Galvanised steel



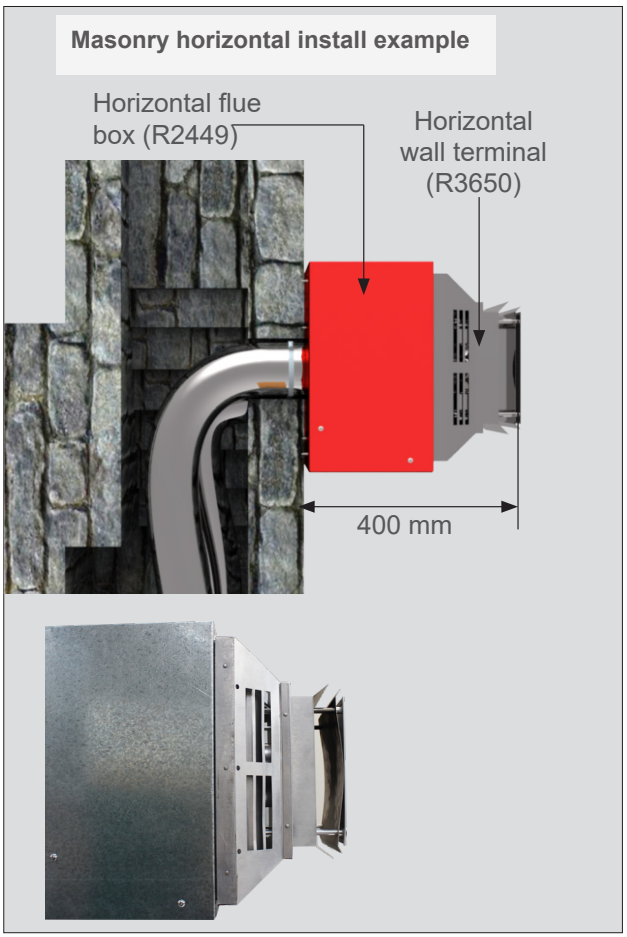


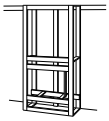
Flue pipe (length and code)		Offset	Rise
None (bend to bend)	N/A	124 mm	340 mm
150 mm	R3630	203 mm	419 mm
230 mm	R3631	257 mm	473 mm
300 mm	R3632	311 mm	527 mm
450 mm	R3633	417 mm	633 mm
600 mm	R3634	524 mm	740 mm
900 mm	R3635	737 mm	953 mm
1200 mm	R3636	949 mm	1165 mm

Example of the horizontal wall terminal (R3650) installed

Example of the mock chimney vertical flue cowl and pipe installed

Example of the Ember flue adapter (R3653) connected to a flue pipe

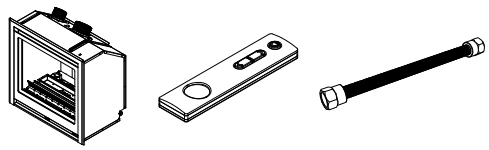




Ember series ordering guide
mock chimney installations

1. Select **gas type** (engine)

The Ember engine comes with; remote control (batteries included), operation guide, installation guide, granule packs, rockwool, crushed glass, vermiculite, and flexible gas connection.



Ember 600 engine **NG**	RDV600N
Ember 600 engine **LPG**	RDV600L
Ember 700 engine **NG**	RDV700N
Ember 700 engine **LPG**	RDV700L

2. Select **frame** option

The frame option will depend on the installation. If you have a hearth, then order the 3-sided frame. If the Ember is being installed elevated from the floor, select the 4-sided frame.

600 black 3-sided frame	R2410
700 black 3-sided frame	R2400
600 titanium 3-sided frame	R2412
700 titanium 3-sided frame	R2402
600 black 4-sided frame	R2413
700 black 4-sided frame	R2403
600 titanium 4-sided frame	R2415
700 titanium 4-sided frame	R2405

3. Select **burn media** option

The media sets cannot be interchanged—ensure the correct set is ordered. The Ember 700 log set is thicker and longer, and the stone set has six more stones.

600 log set	R2422
700 log set	R2420
600 stone set	R2423
700 stone set	R2421

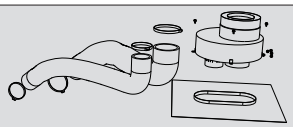
4. Order the **zero clearance frame** (MUST HAVE)

Universal frame for both models. It is required to ensure clearances to combustibles.

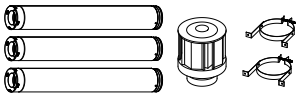
Ember zero clearance frame	R2450

5. Select the **flue components**

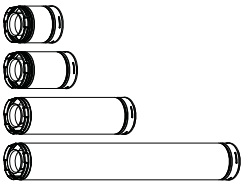
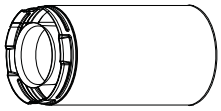
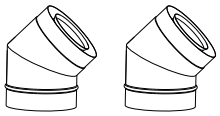
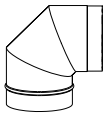
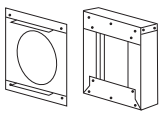
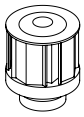
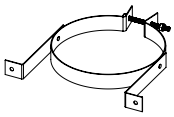
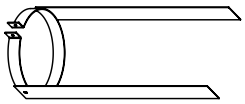
The starting component for a vertical or horizontal configuration starts with an Ember adapter—MUST be ordered. If flueing needs to be longer, order additional flue lengths, or flue extensions as required.

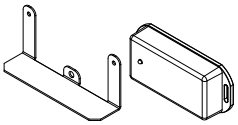
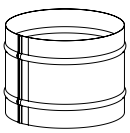


Ember adapter (order this first then add flue kits and / or flue components)	R3653



Flue kit vertical 3.6 m	R3665

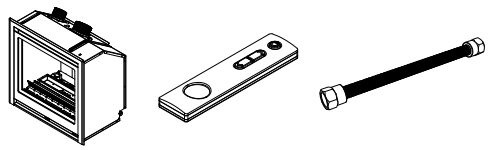
5. Select the **flue components** continued		
	Flue pipe 150 mm Flue pipe 230 mm Flue pipe 300 mm Flue pipe 450 mm Flue pipe 600 mm Flue pipe 900 mm Flue pipe 1200 mm	R3630 R3631 R3632 R3633 R3634 R3635 R3636
	Flue extension 75-175 mm Flue extension 75-360 mm	R3638 R3639
	Flue elbow 45° (two in a kit)	R3642
	Flue elbow 90°	R3643
	Horizontal flashing kit	R3646
	Horizontal wall terminal	R3650
	Roof cowl	R3651
	Wall flue strap	R3647
	Elbow flue strap	R3644

6. Order **optional** accessories		
	Gas Fireplace Wi-Fi module	R7000
	High wind cowl vertical protection kit	R3655

Ember series ordering guide
masonry chimney installations

1. Select **gas type** (engine)

The Ember engine comes with; remote control (batteries included), operation guide, installation guide, granule packs, rockwool, crushed glass, vermiculite, and flexible gas connection.

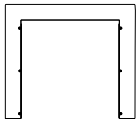


Ember 600 engine **NG**	RDV600N
Ember 600 engine **LPG**	RDV600L
Ember 700 engine **NG**	RDV700N
Ember 700 engine **LPG**	RDV700L

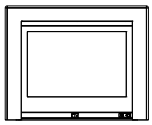
2. Select **frame** option

If the cavity is larger than the 3-sided frame, the infill panel can be ordered **in addition** to the frame to cover the gap behind the fire and frame. Another option, for the Ember 700 only, is a masonry frame which can be ordered **instead** of the 3-sided frame. The masonry frame has a wider profile than the 3-sided frame.

600 black 3-sided frame	R2410
700 black 3-sided frame	R2400
600 titanium 3-sided frame	R2412
700 titanium 3-sided frame	R2402



600 infill panel 700 infill panel	R2453 R2452



700 masonry frame	R2406

3. Select **burn media** option

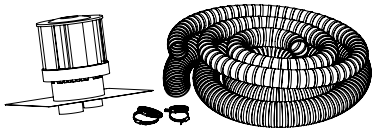
The media sets cannot be interchanged—ensure the correct set is ordered. The Ember 700 log set is thicker and longer, and the stone set has six more stones.

600 log set	R2422
700 log set	R2420

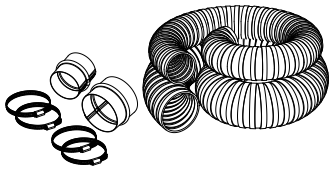
600 stone set	R2423
700 stone set	R2421

4. Select the **flue components**

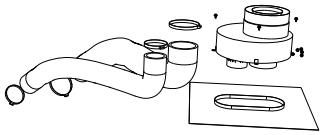
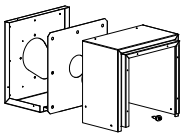
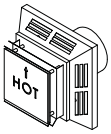
Masonry **vertical** termination flue kit

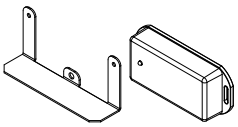
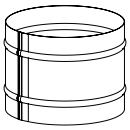


Masonry vertical flexi flue kit 5.5 m DV	R3656



Masonry vertical flexi flue extension kit 2.5 m DV	R3657

4. Select the **flue components**		
Masonry **horizontal** flue components		
	Ember adapter	R3653
	Masonry horizontal flue box	R2449
	Horizontal wall terminal	R3650

5. Order **optional** accessories		
	Gas Fireplace Wi-Fi module	R7000
	High wind cowl vertical protection kit	R3655

Running costs
Cost assumptions and calculations

It's becoming a competitive market out there and we're noticing that plans and pricing is difficult to access and compare. We've based the running costs on the below information. As the cost of LPG and Natural Gas will differ in each area, please check with your local supplier.

Natural gas as at October 2023

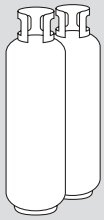
- Mercury Energy c/kWh - 9.91cents (exc. GST), 11.40 cents (incl. GST)
- Mercury Energy fixed daily line charge - $1.61 (includes GST), $11.27 per week

LPG as at October 2023

To fill a 45 kg gas bottle we found the below numbers published online. We used the Genesis Energy figure as the average cost for calculating the running costs.

- Frank Energy LPG bottle refill $140 (includes GST)
- Vector Ongas $132.52-$205.82 (includes GST)
- Genesis Energy $150.48 (includes GST)

45 kg LPG gas bottle energy calculation



1 kg of LPG gas contains 50.4 MJ of energy
1 kW = 3.6 MJ

This means that a 45 kg LPG bottle has approximately 2268 MJ (45 kg x 50.4 MJ)

Natural Gas: Calculating running costs

1. Convert the MJ input of the appliance to kW, for example 12 MJ/h = 3.33 kW/h
2. Calculate the approximate running cost per hour, for example 0.1140 x 3.33 kW/h = $0.37/hr

LPG: Calculating running costs

1. Calculate the cost of gas per MJ/h, for example $150.48 ÷ 2268 MJ = $0.07 per MJ/h
2. Calculate the approximate running cost per hour, for example $0.07 x 12 MJ/h = $0.84 / hr

Ember running cost calculations

Hourly running costs

Model	Heating area	LPG running costs per hr.		NG running costs per hr.	
		on low	on high	on low	on high
Ember 600	46-80 m^2	$0.84	$1.61	$0.37	$0.72
Ember 700	56-96 m^2	$0.98	$1.89	$0.44	$0.85

Please note
The heat output and heating areas will differ slightly for the single sided and double sided variants. Single sided models will be slightly more efficient.

45 kg LPG bottle and weekly running costs

Model	Gas input				45 kg bottle will last (hours)		Weekly running costs ($)			
	Low		High				LPG		Natural Gas*	
	MJ/h	kW	MJ/h	kW	Low	High	Low	High	Low	High
Ember 600	12	3.33	23	6.39	189	99	$29.40	$56.35	$24.22	$36.47
Ember 700	14	3.89	27	7.50	162	84	$24.30	$66.15	$26.67	$41.02

* The NG weekly costs include the $1.61 daily fixed line charge

The running costs values are meant as a guide only. Please refer to the notes regarding running cost assumptions and how values have been calculated on the previous page. Always double check figures based on your own use.

The weekly running costs are calculated based on the gas fire, during cooler months, operating two hours in the morning and three hours in the evening—a total of five hours use each day.

Please note
All Rinnai gas fires require electricity to run—electricity costs have not been factored into the running costs.

The 45 kg LPG bottle hours do not include running times of other gas appliances in use, for example a gas water heater or a gas hob.

Rinnai.co.nz

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