



# Juniper<sup>®</sup> HP Plus

Heat pump water heater



MODELS

4

 R290

CAPACITY (litres)

190 - 293

# Juniper® HP Plus

The Juniper HP Plus is an eco friendly indoor exhaust air heat pump water heater available in four models, with capacities ranging from 200 to 300 litres.

It efficiently transforms free energy from the outside air or waste heat from within the property into a low-cost, renewable source of domestic hot water. Each unit features a removable split top, allowing easy servicing without the need to detach the ducting.

This heat pump is suitable for diverse environments such as schools, offices, gyms, residential properties, and particularly apartment buildings. Coupled with electric radiators, the Juniper HP Plus presents an efficient and cost-effective alternative to traditional heat network solutions.



LEFT HAND

RIGHT HAND

5

5 Year Tank Warranty\*

2

2 Year Parts Warranty\*

ErP

ErP Part L Compliant

SG

Smart Grid Ready

## Natural R290 refrigerant

R290 is a naturally occurring refrigerant which is found in everyday household appliances such as domestic fridge/freezers and portable air conditioners. It has an incredibly low Global Warming Potential (GWP) of just 3, and an Ozone Depletion Potential (ODP) of zero, which maintains better working parameters with heat pumps.

## SAP Product Characteristics Database (PCDB)

The Juniper HP Plus is listed in SAP Product Characteristics Database (PCDB), signifying its contribution to renewables within the SAP framework (model codes 200LH/300LH).

- Left & right hand variants
- Grade 2205L duplex stainless steel hot water cylinder
- Advanced software for greater efficiency
- Integrated 1.6kW back-up electric heater
- Energy class A++
- Touch screen controls or smartphone app
- Automatic anti-legionella cycle
- Flexible positioning
- Hot water boost function

## Higher COP

During water heating, the Juniper HP Plus can automatically calculate and analyse its current operating conditions, then adjust the power input to achieve an optimal COP. Under the standard test condition of EN16147, the water heater can achieve a COP of up to 4.09.

## User-friendly controls

The unit can be controlled locally with the large user-friendly touch screen display, or controlled remotely via WiFi using the Smart Life app or Smart control panel.

- Micro-channel heat coil
- Removable split top for easy servicing
- Extract & dehumidification
- AI learning adapts for optimal efficiency
- Modbus connectivity
- PV ready
- Optional G3 unvented kit
- NSF REG4 Certified

200L



#041-K030-12

300L



#041-K030-13

# Left & Right Hand

While the Juniper HP Plus is well-suited for stand-alone domestic properties equipped with an airing/cylinder cupboard, its design is particularly tailored for application in apartments and houses with both left and right-hand variants. The inclusion of handed front/side-mounted water connections facilitates straightforward integration with pipework affixed to an adjacent wall, ensuring symmetry in pipework installation across all properties. This feature is especially advantageous for suppliers of Prefabricated Utility Cupboards (PUCs), streamlining pipework manufacturing processes and delivering a more pleasing solution overall.



Water heaters should be selected as either of the following four models:

- Juniper HP Plus 200LH
- Juniper HP Plus 200RH
- Juniper HP Plus 300LH
- Juniper HP Plus 300RH

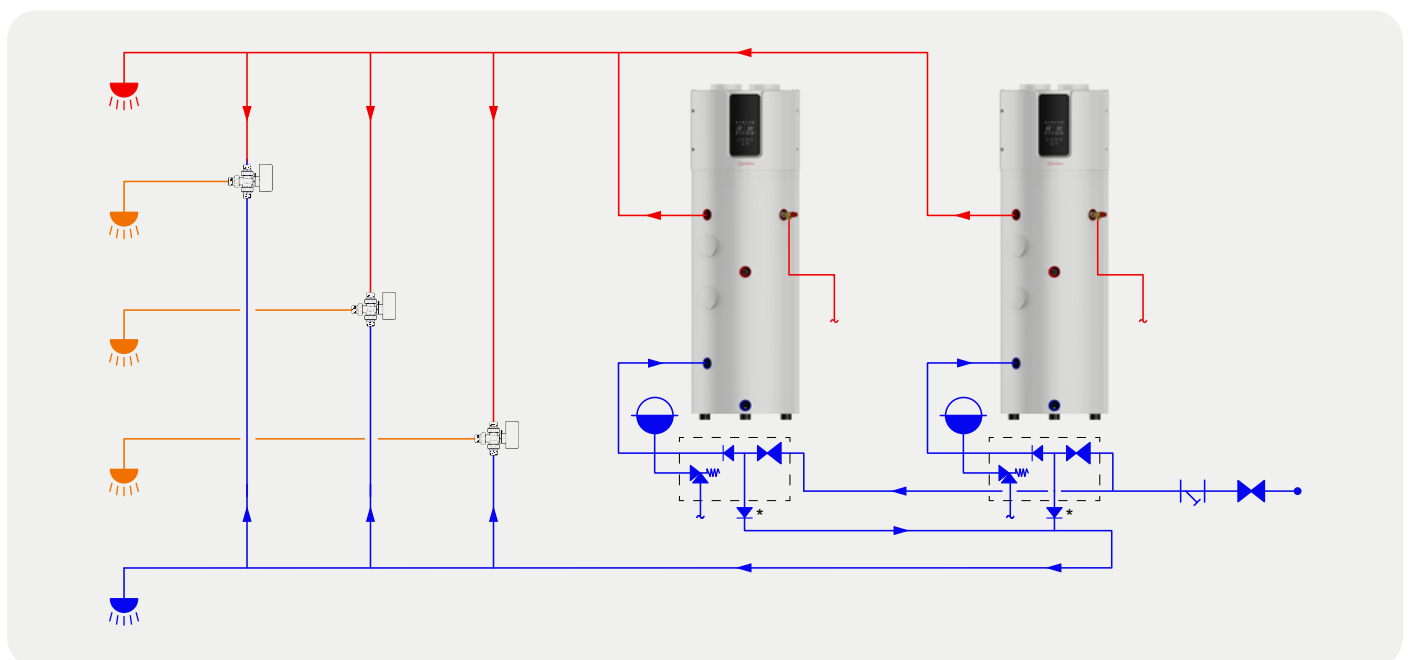
## Removable split top



Each Juniper HP Plus unit is designed with a removable split top, making servicing and maintenance more convenient. This feature allows easy internal access without the need to remove the ducting, reducing downtime and simplifying installation in tight spaces.

# Multiples

To meet a property's domestic hot water needs, multiple Juniper HP Plus water heaters can be installed in parallel. In such configurations, a balanced piping method like reverse return is advised.

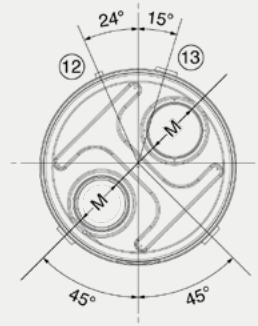


----- Combination valve \*If required by water regulations

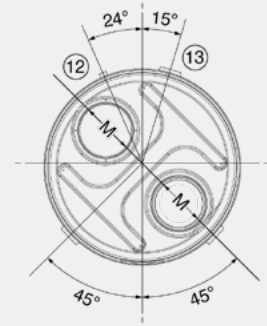
# Dimensions

## Clearances (mm)

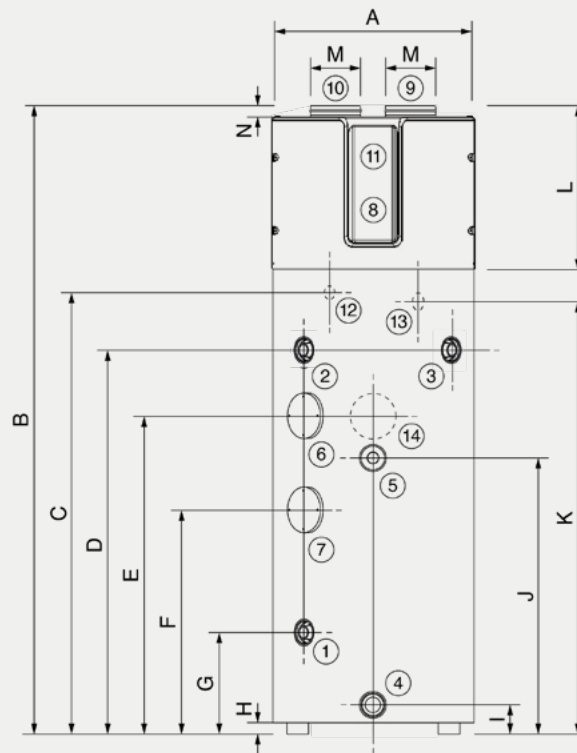
Front	750
Rear	75
Side (Water Connections)	75 (min)
Side (T&P Valve)	75
Top	450



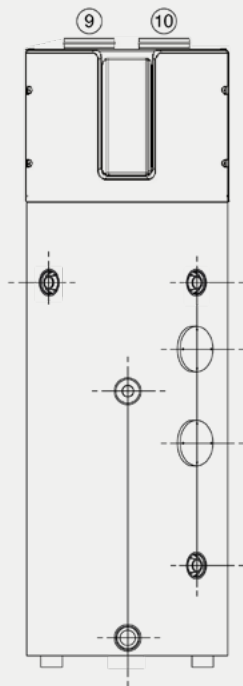
TOP VIEW



TOP VIEW



LEFT HAND



RIGHT HAND

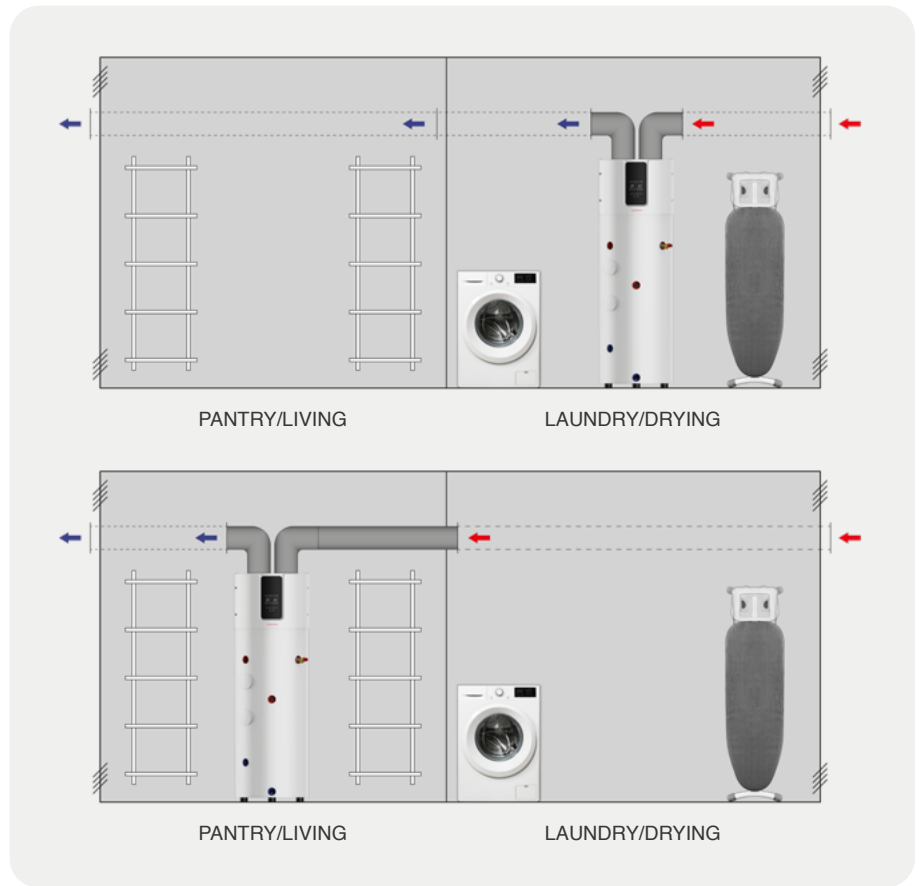
	200	300	
A	mm	Ø565	Ø647
B	mm	1740	1840
C	mm	1217	1320
D	mm	1020	1120
E	mm	860	920
F	mm	600	665
G	mm	210	250
H	mm		35
I	mm		40
J	mm	735	790
K	mm	1135	1230
L	mm		445
M	mm		Ø160 <sup>+0</sup> / <sub>-2</sub>
N	mm		30

Item	Size
1 Cold Water Inlet Connection	inch G¾ F
2 Domestic Hot Water Outlet Connection	inch G¾ F
3 T&P Valve Connection	inch G¾ F
4 Cylinder Drain Connection	inch G¾ F
5 Magnesium Anode	
6 Manual Reset Thermostat	
7 Immersion Heater	
8 Control Panel	
9 Air Inlet Connection	mm Ø160 <sup>+0</sup> / <sub>-2</sub>
10 Air Outlet Connection	mm Ø160 <sup>+0</sup> / <sub>-2</sub>
11 Heat Pump	
12 Power Flex	
13 Condensate Connection	inch G½ F
14 Modbus/PV	

# Installation

The Juniper HP Plus can draw supply air from the outside, a ventilated internal space of waste heat, or both. When the supply and extract air terminate in the same space, a minimum volume of 18m<sup>3</sup> is required. If supply air is drawn from a ventilated internal space, cooling and dehumidification of that space will occur.

The unit discharges cool air, which can be routed outside or to a ventilated area for comfort cooling. Cooling is available only during heat pump operation, although the fan on the unit can function separately for ventilation purposes.



# Flue duct pressure drops

## 200

<b>Air flow</b>		m3/h	350	300	250	200
		l/s	97	83	69.4	55.5
<b>Static pressure</b>		Pa	0 - 60	60 - 120	120 - 170	180 - 200
20/15°C	Heating capacity	W	1600	1592	1584	1544
	COP		4.03	3.99	3.69	3.65
7/6°C	Heating capacity	W	1250	1163	1150	1100
	COP		3.34	3.13	2.79	2.76

## 300

<b>Air flow</b>		m3/h	350	300	250	200
		l/s	97	83	69.4	55.5
<b>Static pressure</b>		Pa	0 - 60	60 - 120	120 - 170	180 - 200
20/15°C	Heating capacity	W	1600	1592	1584	1544
	COP		4.09	4.07	3.76	3.72
7/6°C	Heating capacity	W	1250	1163	1150	1100
	COP		3.34	3.15	2.82	2.79

# Performance data

Designed, fabricated and tested in accordance with EN12897

200

300

## General

DHW storage volume	litres	190	293
Max DHW storage temperature (without electrical heater)	°C		65
Max DHW storage temperature (with electrical heater)	°C		75
DHW storage temperature range (min/max)	°C		10 / 70
Max DHW supply pressure (tank and secondary pipework balanced cold and hot)	bar		6.0
Min cold water supply pressure (tank and secondary pipework balanced cold and hot)	bar		1.5
DHW cylinder test pressure	bar		10
T&P valve pressure/temperature rating <sup>1</sup>	bar/°C		7 / 90
Expansion vessel size/pressure	litres/bar		25 / 10
DHW cylinder material		Duplex stainless steel 2205L	
DHW cylinder insulation material		Polyurethane foam (45mm)	
Outer case finish/material		Powder coated steel	
Standing losses	kWh/day	1.488	1.632
Nominal air flow	m <sup>3</sup> /hr	See table on page 5	
Maximum duct pressure drop at nominal air flow	Pa	See table on page 5	
Air supply working temperature range (min/max)	°C		-7 / 43
Sound pressure level @ 1 metre (EN12102) / Sound power level (EN12102)	dB(A)		39 / 52
Weight (empty/full)	kg	72 / 272	87 / 387

## Performance

SCOP		3.346	3.368
Tapping cycle		L	XL
Heat pump rated output (A7/W51) <sup>2</sup>	kW	1.20	1.23
Volume recovery time (A7/W51) <sup>2</sup>	hours	6.3	9.9
COP (EN16147) (A7/W51) <sup>4</sup>		3.346	3.368
Water heating efficiency (A7/W51) <sup>4</sup>		138.9%	138.4%
Energy class (EN16147) (A7/W51) <sup>4</sup>		A+	A+
Standby power consumption (A7/W51) <sup>3</sup>	W	23	27
Heat pump rated output (A20/W51) <sup>2</sup>	kW	1.54	1.6
Volume recovery time (A20/W51) <sup>2</sup>	hours	5.0	7.8
COP (EN16147) (A20/W51) <sup>4</sup>		4.03	4.09
Water heating efficiency (A20/W51) <sup>4</sup>	%	167.6%	168.5%
Energy class (EN16147) (A20/W51) <sup>4</sup>		A++	A++
Standby power consumption (A20/W51) <sup>3</sup>	W	20	24
Mixed water at 40°C (V40)	litres	220	348

## Electrical

Power supply	V/Ph/Hz	220-240/1/50	
Electrical heater power	kW	1.6	
Max power consumption (without electrical heater)	kW	0.7	
Max power consumption (with electrical heater)	kW	2.3	
Max current (without electrical heater)	A	3.05	
Max current (with electrical heater)	A	9.85	
Electric heater type/make		Immersion / DJR-1500-3 1.6kW 230V 50Hz	
Required fuse rating	A	13	
Protection class		IPX1	

## Integrated heat pump specification

Compressor brand/model/type		GMCC / RDSN82V11TZE / Rotary	
Compressor displacement	cm <sup>3</sup> /rev	8.18	
Refrigerant type/charge	/ g	R290 / 150	
Fan motor type		DC	
Fan motor electrical consumption	W	30	
Fan motor speed (max)	RPM	880	
Expansion valve type		Electronic	
Cylinder heat coil material/type		Aluminium microchannel	

<sup>1</sup> When supplied as part of optional unvented kit | <sup>2</sup> Capacities and Heating Time based on ERP(EN16147) for Stage C, water temp heating from 10°C to 51°C  
<sup>3</sup> Standby power input based on ERP(EN16147) for Stage D | <sup>4</sup> COP and Energy Class based on ERP(EN16147) for Stage E with tapping cycle M / L / XL

# Complementary Products



## Solene

- WiFi connectivity
- White tempered glass panel
- Wall mounted
- Eco/Comfort/Anti-frost mode
- Open window detection
- Daily and weekly programming
- Overheat safety protection



Model		Height	Depth	Output	Voltage	Weight	Input Frequency
Code	Width						
	mm	mm	mm	W	V	kg	Hz
SOL600W	540	425	50	600	230/240	4.55	50-60
SOL1000W	515	430	66	1000	230/240	5.25	50-60
SOL1500W	645	430	66	1500	230/240	6.55	50-60
SOL2000W	815	430	66	2000	230/240	7.20	50-60

Electrical components carry a 2-year warranty.

## Controls

### Smart Life App

Using the Smart Life app you can control both the Juniper HP Plus & the Solene, with the following features:

- Set daily and weekly programmes for your heating and domestic hot water
- Set the temperatures of each operating mode
- Turn on and off all functions of each radiator
- Conveniently organise your radiators into groups



### Optional Control Panel

Using the Smart Control Panel S you can control both the Juniper HP Plus & the Solene:

- 4 inch full screen
- Alexa Voice Service
- Zigbee Gateway



**Modutherm Limited**  
Unit 4 Genesis  
Endeavour Drive  
Basildon, SS14 3WF

**Modutherm® Limited**  
**modutherm.co.uk**  
Tel: 0345 521 5666  
modutherm@modularhg.co.uk

Your local contact is:

