

# Domusa

## Dual Clima HT PRO

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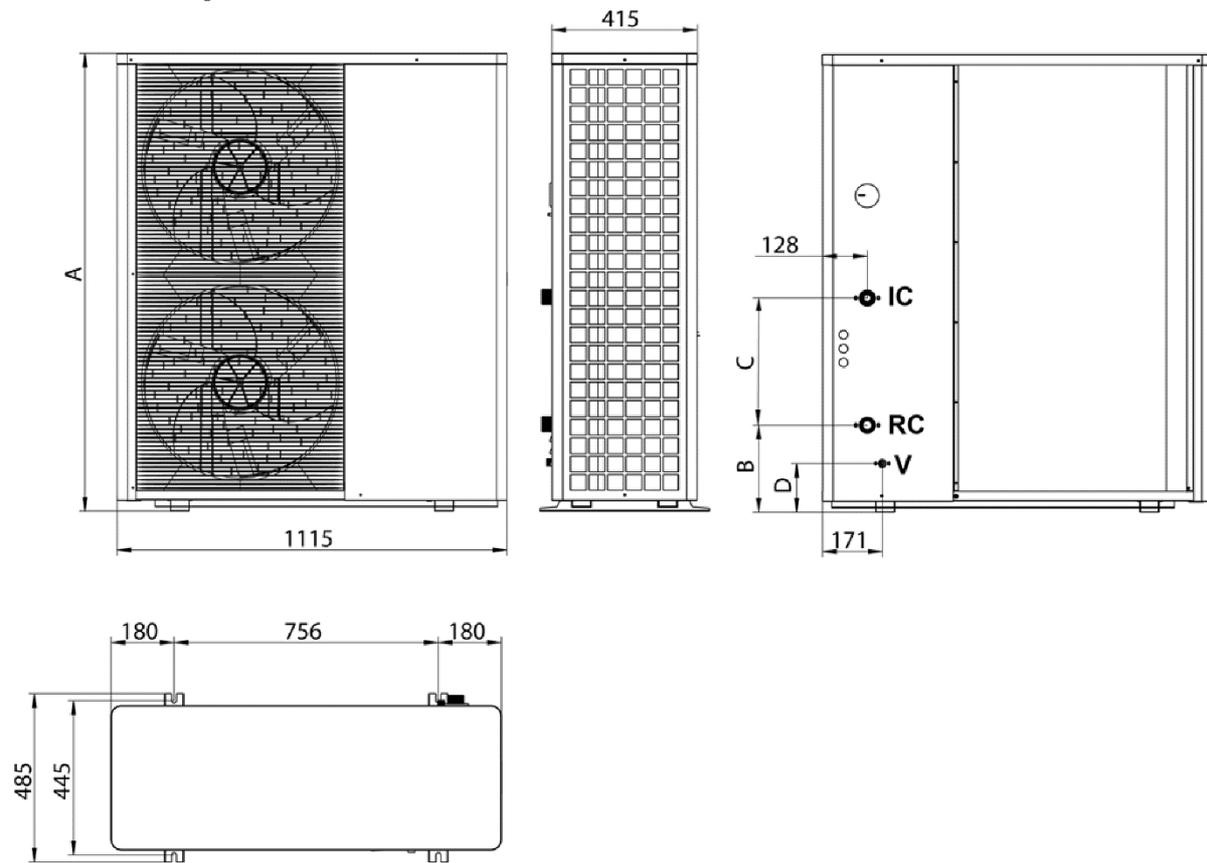
Installation Advice



# Installation Advice

The purpose of this document is to highlight key information that is crucial to correct installation. Details, important to Pre-Pipe stage through to Final Fit are included here.

## Heat Pump Dimensions



Dimensions	12HT PRO	16HT PRO	19HT PRO
A (mm)	800	1320	1320
B (mm)	140	140	466
C (mm)	476	476	150
D (mm)	62	62	144

Hydronic Port Size	12HT PRO	16HT PRO	19HT PRO
Flow	1" Male	1¼" Male	1¼" Male
Return	1" Male	1¼" Male	1¼" Male
Drain	½" Male	½" Male	½" Male

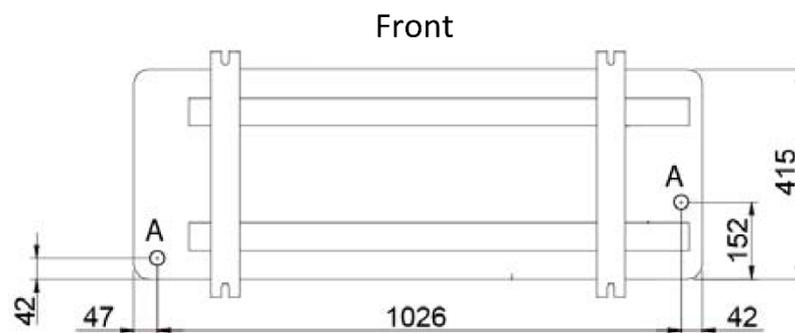
## Condensate Management

This is an underside view of the heat pumps condensate pan with dimensions for considerations around condensate management.

Condensate can be piped to a drain such as a soak pit or free drain onto the concrete if a strip drain is being used around the Heat Pump.

It is advised to make provisions to manage condensate as this can become a slip hazard when the condensate potentially freezes in winter.

Connection to the heat pump can be made using the supplied drain pan fitting.



## Maximum Pipe Lengths

### INTO BUFFER

The table below details the recommended maximum primary pipe length when using Multitubo pipe directly to a buffer tank. This can be increased with the use of an additional circulation pump if required. Review system design or contact engineering for more information.

Diameter $\varnothing$ (mm)	Max Pipe Length – Flow + Return (m) INTO BUFFER		
	12HT PRO	16HT PRO	19HT PRO
32	29	18	21
40		43	52

### WITHOUT BUFFER

If no buffer tank is used and the heat pump is directly feeding underfloor or radiators these values will be reduced dependant on the system design. The system pressure drop will need to be carefully checked against the heat pump circulation pump curves to confirm that no additional pump or buffer tank is required. Review system design or contact engineering for more information.

	Max Pipe Length – Flow + Return (m) WITHOUT BUFFER		
Diameter $\varnothing$ (mm)	12HT PRO	16HT PRO	19HT PRO
32	8	15	6.6
40	18	37	16

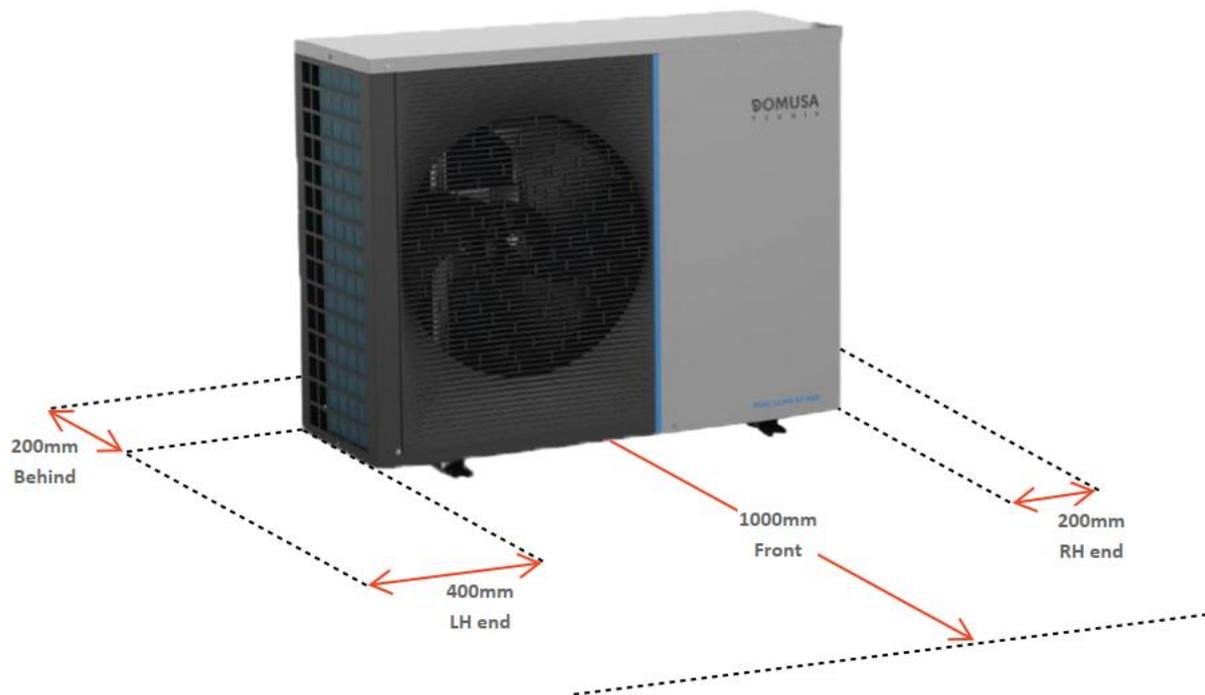
### BUFFER WITH HWC

Where the heat pump is heating a HWC via a 3 port diverting valve on the primary side of the buffer tank the maximum pipe length to the HWC are less than shown in the table above. For systems with DHW heating the recommended maximum primary pipe lengths from the heat pump to the HWC are:

	Max Pipe Length To HWC – Flow + Return (m)			
Diameter $\varnothing$ (mm)	12HT PRO & 200/300L Single Coil Baxi HWC	16HT PRO & 200/300L Single Coil Baxi HWC	19HT PRO & 300L Twin Coil Baxi HWC	19HT PRO & 500L Single Coil Baxi HWC
32	13	16	14	15
40	30	39	33	37

## Heat Pump Clearances

Basic minimum clearances CHNZ require to be observed. Certain installations with enclosed areas may require larger clearances. See Installation manual for more detail.



It's required that the heat pump be mounted on anti-vibration mounting feet, a minimum of **80mm** off the ground. This will allow for correct air flow around the unit and prevent dirt and leaf debris building up at the base of the finned heat exchanger. [HPKANTVIBR](#) allows each corner of the heat pump to be adjusted for installations on uneven ground and includes fasteners.



## Guidelines for the safe use of hydrocarbon refrigerants.

Consideration of clearances from ignition sources or areas for refrigerant to pool or collect.

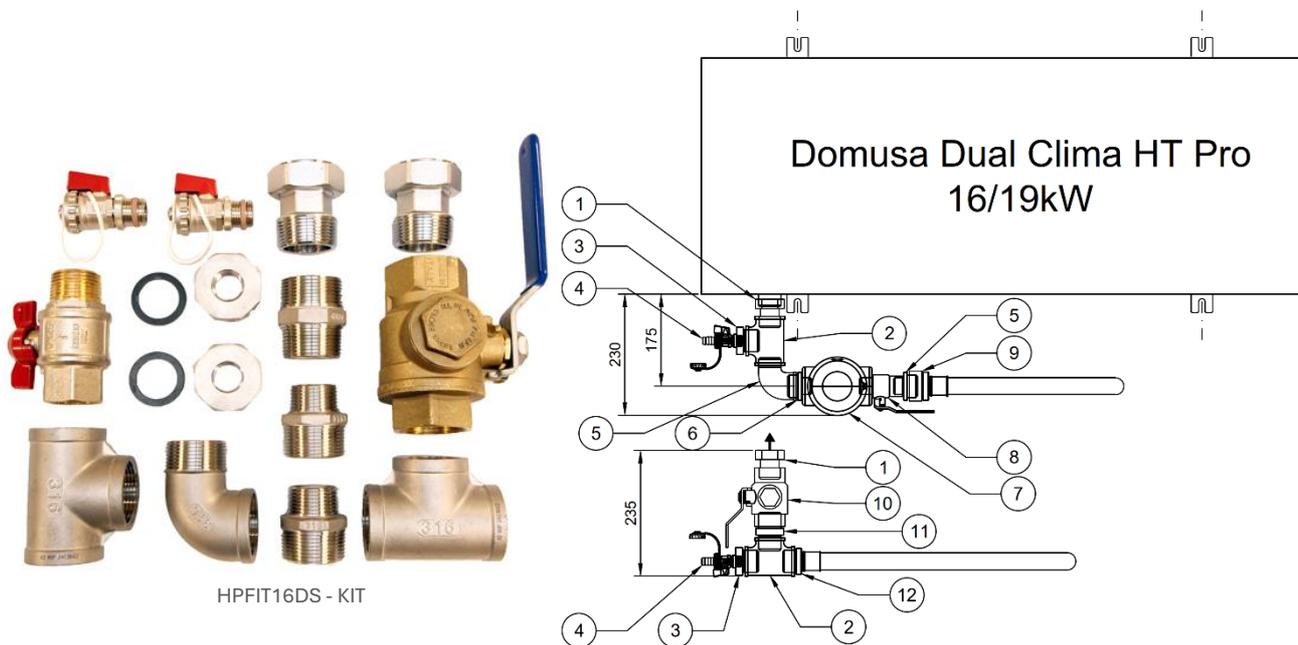
Location	Minimum Distance to be observed (m)
Possible sources of ignition	1.5m
Electrical isolator switches - <IP67	0.5m
Combustion engines (generators)	1.5m
Large untrapped drains or sewers where refrigerant cannot dissipate	1.5m

Mandatory installation of deaerator on the primary flow is required. This is to mitigate any chance of the R290 refrigerant charge, entering the system water and then being able to vent to an occupied space in the unlikely event of a heat exchanger failure. It is important to ensure a permanent power supply to the heat pump for anti-freeze protection. The deaerator bleed cap must be left open.

CHNZ supply a [FARDEAR1](#) as part of the heat pump KIT, this can integrate with one of the various fitting kit options ie. HPFIT114DS (sold separately) for ease of installation.

## Heat Pump Fitting KIT Details

Fittings List Per branch			
16/19kW			
Fitting Index	Flow Branch	Fitting Index	Return Branch
1	1 1/4" MT-FT Swivel Union	1	1 1/4" MT-FT Swivel Union
2	1 1/4" Tee	10	1 1/4" Filter Ball Valve
3	1 1/4" To 1/2" Bush	11	1 1/4" Nipple
4	1/2" Drain Fill Valve	2	1 1/4" Tee
5	1 1/4" MT- FT Elbow	3	1 1/4" To 1/2" Bush
6	1 1/2" To 1" Nipple Reducing	4	1/2" Drain Fill Valve
7	1" FAR Deaerator (2251 1)	12	MT32 1 1/4" MT
8	1" Ball Valve (MT-FT)		MT32 Pipe As Feeds
9	MT32 1 1/4" FT		
	MT32 Pipe As Feeds		



## Fitting KIT Assembly

The image below details basic assembly of the HPFIT16DS and HPFIT19DS swivel Fitting KIT, including integration of the FARDEAR1 FAR Deaerator. To achieve the dimensions stated on the previous page it is recommended that all fittings are threaded to the bottom threads where possible. CHNZ recommend using Loctite 55 thread cord, Hemp and Hawk White or other thread sealing products for these joints.

Insulation of the fitting kit is required.



FITTING KIT CODE	TYPE	FITTING SIZE FOR FLOW ASSEMBLY	RECOMMENDED FITTING - FLOW	FITTING SIZE FOR RETURN ASSEMBLY	RECOMMENDED FITTING - RETURN
HPFIT1D	Direct Connection	1"	MT321MT	1¼"	MT321MT
HPFIT114D	Direct Connection	1¼"	MT40114FT	1¼"	MT40114MT
HPFIT1DS	Swivel Connection	1"	MT321MT	1¼"	MT321MT
HPFIT114DS	Swivel Connection	1¼"	MT40114FT	1¼"	MT40114MT

## Key Heat Pump Specifications

For further detail, see Technical Characteristics in Installation and Operating Manual

MODEL	HPDDCP12	HPDDCP16	HPDDCP19
<b>Heating</b>			
Capacity [kW]	12.60	16.84	19.52
Power Input [kW]	2.72	3.62	4.30
COP*	4.63	4.65	4.54
<b>Cooling</b>			
Capacity [kW]	11.8	15.09	18.62
Power Input [kW]	2.61	3.58	4.43
Power Supply	230VAC Single Phase	230VAC Single Phase	230VAC Single Phase
Max Current Draw [A]	17	27A	30.4A
Minimum Cable Size [mm <sup>2</sup> ]	4mm <sup>2</sup>	6mm <sup>2</sup>	6mm <sup>2</sup>
Recommended Breaker size [A]	20A	32A	32A
Hydronic Connection Port Size ["BSP]	1"	1 1/4"	1 1/4"
Minimum System Water Volume [L]	48L	60L	80L
Minimum System Flow Rate [L/min]	16L/min	20L/min	24L/min
<b>Dimensions &amp; Weight (NET)</b>			
Height [mm]	900	1,320	1,320
Width [mm]	1,115	1,115	1,115
Depth [mm]	415	415	415
Weight [kg]	125	140	146
<b>Noise [dB]</b>			
Sound Power dB(A)	52	55	55

## High Flow Temperature Warning Sticker

With underfloor installations it is important that high flow temperature i.e.  $>50^{\circ}\text{C}$  are not introduced to the floor.

High temperatures can cause damage to certain construction materials as well as being uncomfortable.

Please fit the supplied sticker to the bezel/surround of the heat pump controller to advise users of hazards when increasing the setpoint.

Sticker can be found with the Commissioning Guide QR code sheet, fixed to the outside of the heat pump box.

If it is a radiator system, the above can be disregarded.



**WARNING**

Your system is designed to operate with low water temperatures. Don't turn the heating set point up before talking to your installer or CHNZ Aftersales

# Attention Before You Commission

The Domusa HT PRO Commissioning Guide has been created to assist you in completing your installation. Follow the instructions by scanning the QR code below or by visiting our website.



For further assistance please contact: [aftersales@centralheating.co.nz](mailto:aftersales@centralheating.co.nz)