

Domusa

Dual Clima HT

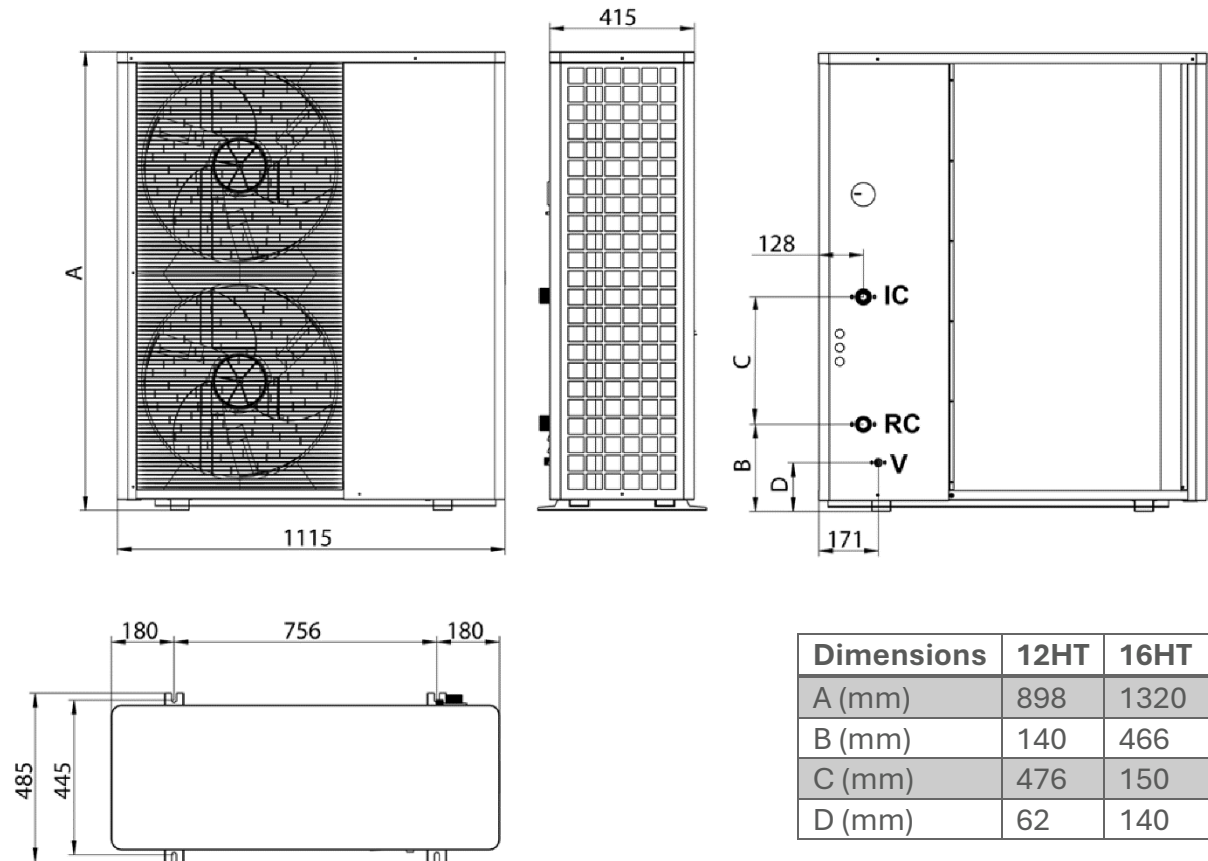
Installation Advice



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 12HT & 16HT



| Hydronic Port Size | 12HT | 16HT |
|--------------------|---------|----------|
| Flow | 1" Male | 1¼" Male |
| Return | 1" Male | 1¼" Male |
| Drain | ½" Male | ½" Male |

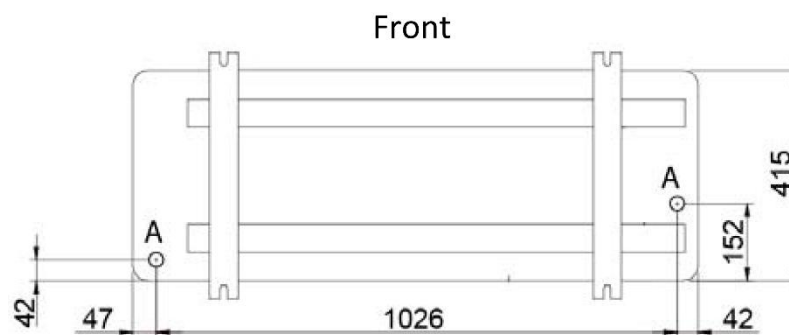
Condensate Management

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

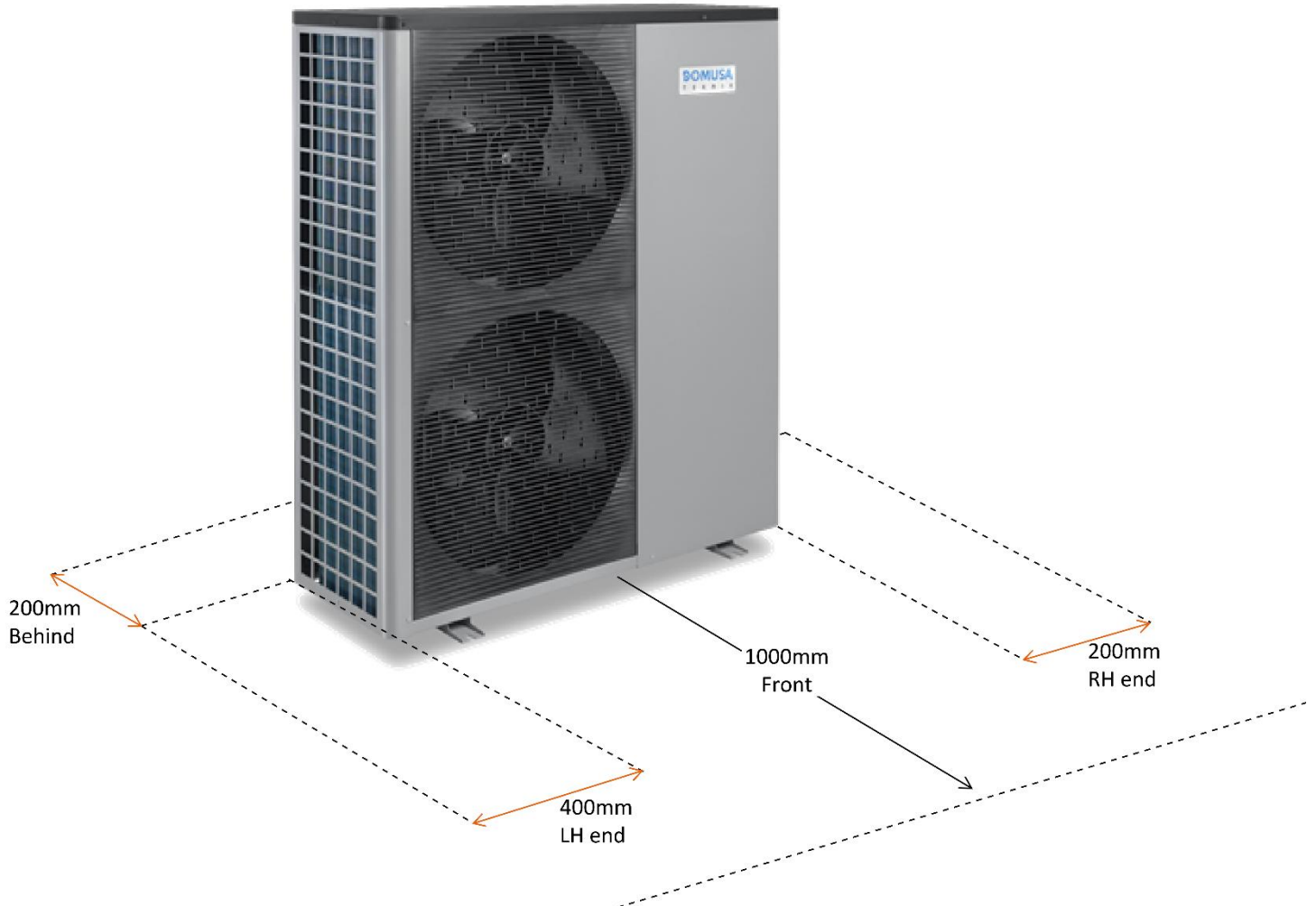
The table below details the maximum primary pipe length for both 12HT and 16HT when using 32mm Multitubo pipe directly to a buffer tank. This can be increased with the use of an additional circulation pump. Review system design or contact engineering for more information.

| Diameter \varnothing (mm) | Max Pipe Length – Flow + Return (m) | |
|-----------------------------|-------------------------------------|------|
| | 12HT | 16HT |
| 32 | 44 | 28 |

If no buffer tank is used and the heat pump is directly feeding underfloor or radiators these values may be reduced dependant on the system design. Again, this can be increased with the use of an additional circulation pump. Review system design or contact engineering for more information.

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.

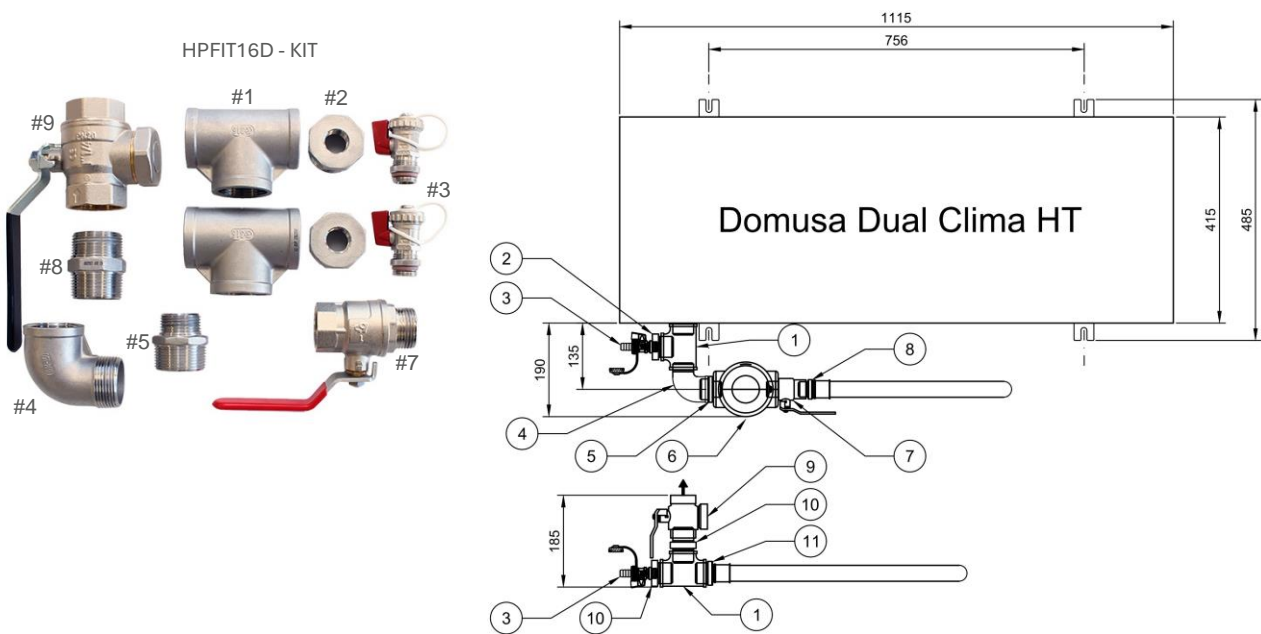
| Location | Minimum Distance to be observed (m) |
|---|-------------------------------------|
| Possible sources of ignition | 1.5m |
| Electrical isolator switches - <IP67 | 0.5m |
| Combustion engines (generators) | 1.5m |
| Large untrapped drains or sewers where refrigerant cannot dissipate | 1.5m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

Mandatory installation of deaerator on the primary flow is required. This is to mitigate any chance of the 1.45Kg (16kW) 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 will integrate with the [HPFIT16D](#) or HPFIT12D Fitting Kit (sold separately) for ease of installation.

Heat Pump Fitting KIT Details

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



HPFIT16D
Flow
connection
size: 1"

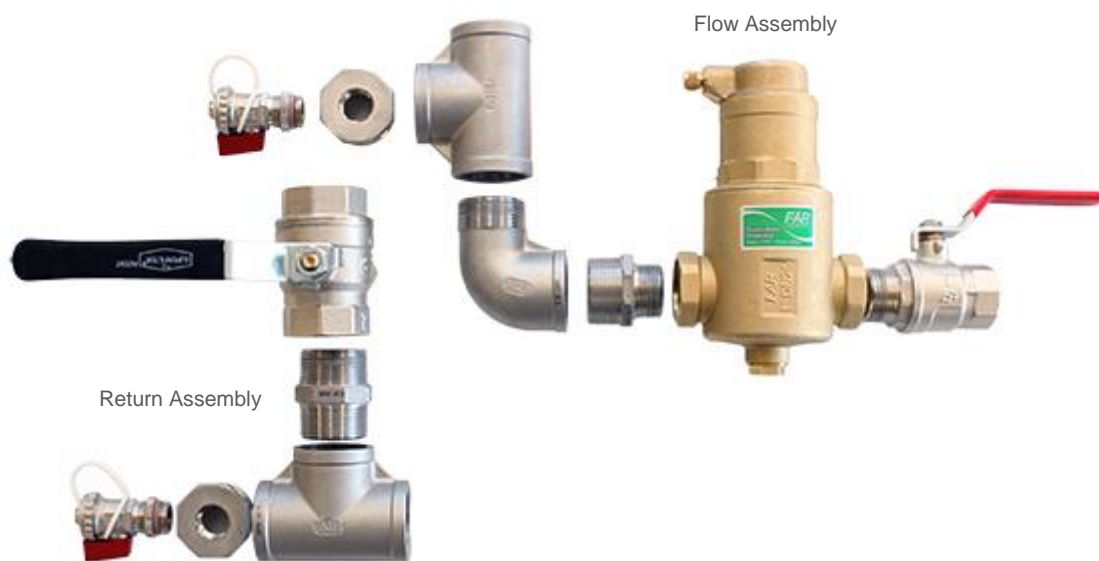


HPFIT16D
Return
connection
size: 1 1/4"

Fitting KIT Assembly

The image below details basic assembly of the HPFIT16D and HPFIT12D 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.



HPFIT16D

Required primary pipe fitting size for **flow** assembly: 1"

Recommended fitting: [MT321MT](#)

Required primary pipe fitting size for **return** assembly: 1¼"

Recommended fitting: [MT32114MT](#)

HPFIT12D

Required primary pipe fitting size for **flow** assembly: 1"

Recommended fitting: [MT321MT](#)

Required primary pipe fitting size for **return** assembly: 1"

Recommended fitting: [MT32114MT](#)

Heat Pump Electrical Connections and Supply

Supply

| Model | Supply | Max Current Draw (A) | Minimum cable size (mm ²) | Recommended fuse size (A) |
|-------|----------------|----------------------|---------------------------------------|---------------------------|
| 16HT | 230VAC 50Hz | 27A | 6mm ² | 32A |
| 12HT | 230VAC 50Hz | 17A | 4mm ² | 25A |

Key Heat Pump Specifications

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

Dual Clima 12HT

Capacity: 12kW

COP: 4.48 @ 35/30/7°C

Size: 898H x 1115W x 415D

Weight: 125kg

Power Supply: 230VAC Single Phase

Max Current Draw: 17A

Hydronic connection Port Size: 1"

Sound Pressure: 44 dB(A) (1m)

Minimum system water volume: 48 litres.

Minimum system flow rate: 16L/min.

Origin: Spain

Dual Clima 16HT

Capacity: 16kW

COP: 4.69 @ 35/30/7°C

Size: 1320H x 1115W x 415D

Weight: 175kg

Power Supply: 230VAC Single Phase

Max Current Draw: 27A

Hydronic connection Port Size: 1-1/4"

Sound Pressure: 48 dB(A) (1m)

Minimum system water volume: 60 litres.

Minimum system flow rate: 20L/min.

Origin: Spain

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 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.



Domusa Commissioning Guide

For further assistance please contact: aftersales@centralheating.co.nz