

# CHOFU Heat Pump Booster Element Installation Instructions

**CHNZ Electric Element Kit Product Code = TSE3KIT**

## **Kit Contents:**

- TSE3 - 3kW Element with Sensor Pocket and Cover
- TSE3T - 3kW Element Thermostat LP Copper 7" with reset
- BXCSHT - Buffer Tank Probe
- HONASPSS - Thermostat Pocket – Stainless
- VPRESRELF - Pressure Relief 1/2" x 3/4" 3 Bar
- HMHBRB3215 - Brass Reducing Bush 32x15mm

## **Installation Instructions:**

(internal installation only)

1. Install the pressure relief valve directly on the buffer tank. If installing off the top port, use a tee to accommodate the air vent installation along with the pressure relief valve.

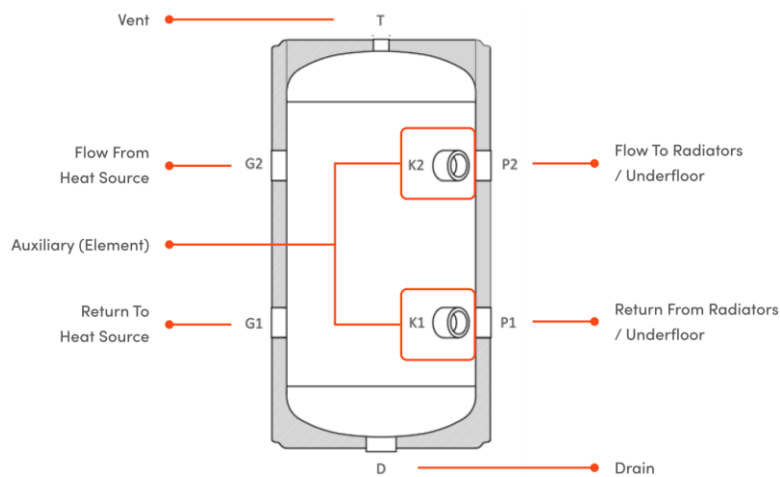
**It is extremely important that the pressure relief valve cannot be isolated from the vessel/element.**

Please also ensure that a suitable copper drain is installed for the pressure relief valve.

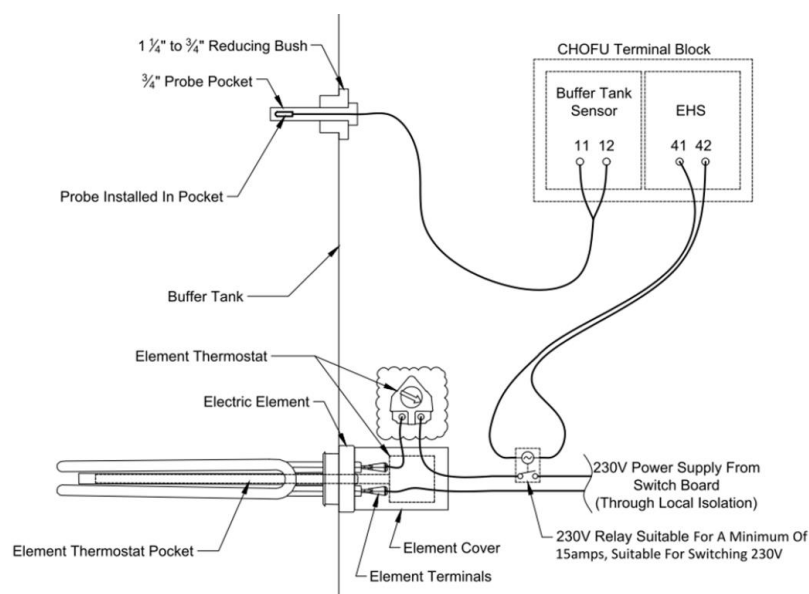
2. For installation of the electric element probe, use the supplied 1 1/4" to 1/2" reducing bush and fit a Probe Pocket into one of the upper ports (G2, K2, P2).
3. Wire the buffer tank sensor to terminals 11 and 12 on the Chofu terminal board. as shown in the below wiring diagram.
4. Install the electric element directly into one of the lower ports (G1, K1, P1).  
\*Please note, you may need to remove the Black plastic trim around the element port to enable the element to seat correctly.

5. As shown on the below wiring diagram connect the electric element through the Element thermostat and then wire it to terminals 41 and 42 on the Chofu heat pump using a 230V relay rated for a minimum of 15amps, suitable for switching 230V.
6. Common settings for the thermostat high limit would be:
  - Underfloor System = Thermostat set to 55°C
  - Radiator System = Thermostat set to 65°C.

## Buffer Tank Drawing:



## Wiring Drawing:



## Heat Pump Parameters To Change

Parameter	Function Description	Value	
		Default	Set To
47 00	EHS type of function 0 = Disable 1 = Replacement mode 2 = Supplementary mode	0	2
47 01	Conditions to be available EHS 0 = always enabled 1 = depends on Outdoor air temperature	1	1
47 04	Outdoor air temperature to enable EHS (Supplementary mode)	5°C	As Per Table <sup>*1</sup>
47 05	Outdoor air temperature hysteresis to disable EHS (Supplementary mode)	5°C	1°C
47 06	EHS activation delay time	5 min	30 min
47 07	Integration time for starting EHS	600°CxSec	900°CxSec
51 41	Terminal 41-42 : EHS (External heat source for space heating) 0 = disable 1 = enable	1	1

<sup>\*1</sup>Set 47 04 As per table below, or as specified in the system design – check with CHNZ Engineering if in doubt.

## Parameter 4704 Recommended Regional Settings:

The table below list the recommended setting for parameter 4704 for activation of the booster element, these temperatures are around 3°C than the standard outside air temperature used in the CHNZ designs for each region

Region	Recommended P22 Setting (°C)
Northland	8
Auckland	8
Waikato	5
Bay of Plenty	4
Gisborne	6
Hawke's Bay	4
Taranaki	6
Wanganui	3
Manawatu	4
Wairarapa	3
Wellington	5
Nelson Bays	3
Marlborough	2
West Coast	5
Canterbury	2
Timaru - Oamaru	0
Otago	1
Southland	2