



A Donaldson Company

A WORLD LEADER IN FUME EXTRACTION TECHNOLOGY

# TCU – Temperature Control Unit

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Precision temperature control unit designed for solder paste applications.

The Temperature control unit (TCU) has been designed to meet a very specific process requirement within the electronics sector. The reliable placement of surface mount devices during PCB assembly requires that during the initial printing stage the solder paste is maintained at a temperature which ensures optimum performance.

With assembly now on a global basis the variation of local climate and factory conditions means that this optimum level cannot be maintained without some form of intervention.

The design of the TCU includes cooling and heating elements which ensure that the temperature within the printing environment is maintained within 1°C of the optimum paste performance temperature regardless of whether the factory ambient is above or below this level.

## Technology



Reverse flow air technology



ProTECT service plan



SureCHECK quality standard

## Key features of the TCU

Heaters and refrigerated cooling providing a constant temperature within the print area, accurate to within 1°C  
Standard

Process monitoring via temperature sensors that can be strategically mounted within the printer  
Standard

A four colour beacon provides operating condition status  
Standard

Two capacitive level sensors monitor the condensate level  
Standard

An additional silencer can be retro-fitted if required  
Standard

Single phase supply  
Standard

Digital programmer with graphic display  
Standard

To prevent process contamination, the conditioned air is passed through a filter before entering the TCU  
Standard

Condensate produced is gravity fed to an easily removed 5 litre container or piped to an external drain  
Standard

Fail-safe condensate sensor with TCU shutdown in the base of the unit to detect water in the event that the condensate container has not been re-fitted after emptying  
Standard

Compact and mobile unit with a small footprint  
Standard

Contact BOFA at <https://bofainternational.com/en/contact/>

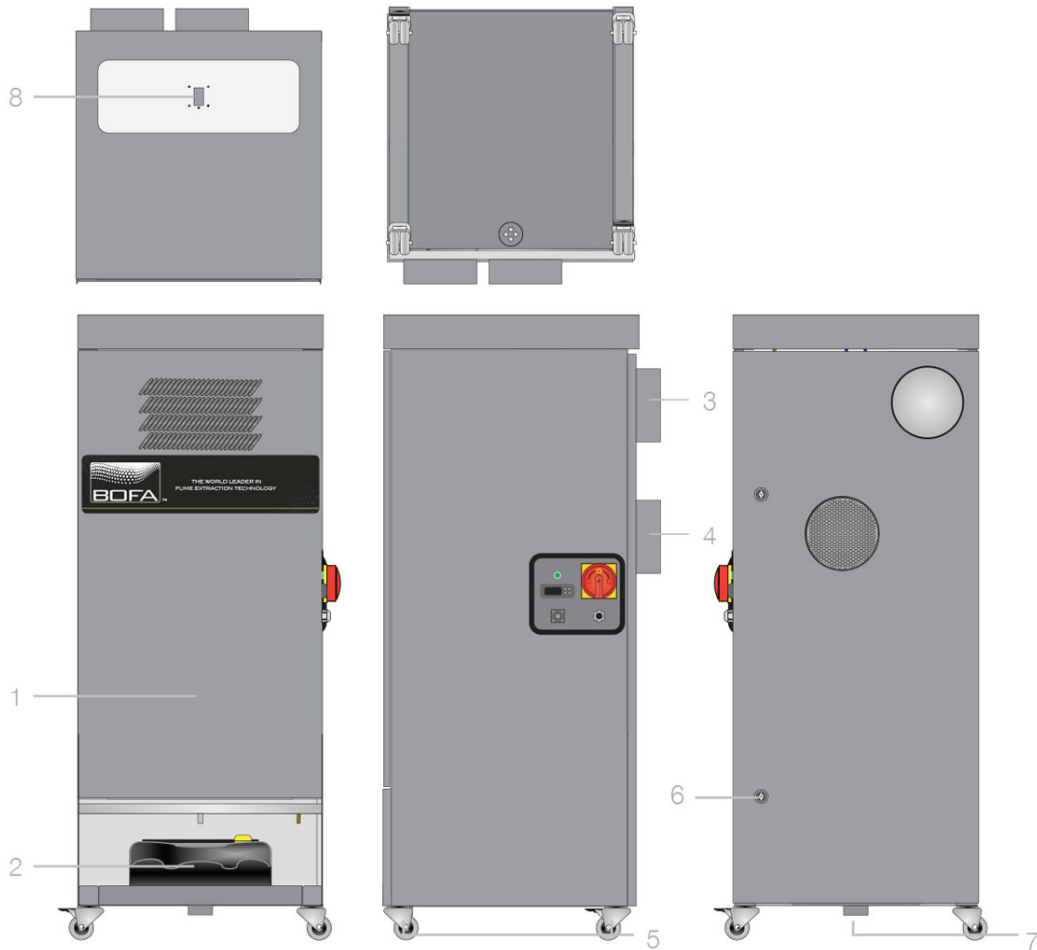
<https://bofainternational.com/en/portal/datasheets/tcu-temperature-control-unit/>







## Technical specification

- 1. Chiller module
- 2. Condensate collection container
- 3. Air outlet
- 4. Air inlet
- 5. Castors
- 6. Service door lock
- 7. Fail style condensate sensor
- 8. Four colour beacon mounting plate

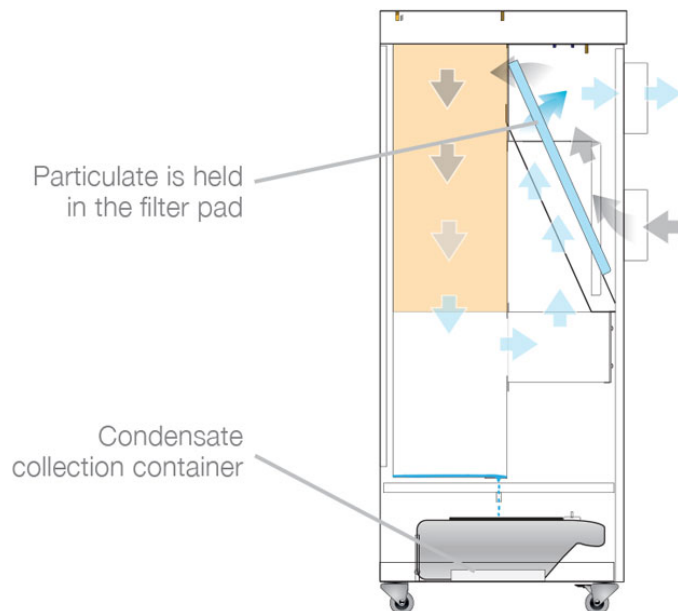
ID 150mm flexible hose,  
L=2M, 2EA connect air outlet  
and inlet to machine, fix with 4  
clips



## Airflow through filters

-  Air chiller/warming unit
-  Pre-filter
-  Clean air, at set temperature
-  Contaminated air





## Technical data

	EU
Air delivery system	Re-circulating
Temperature range	+/- 8°C from ambient within a programmable range of 19 – 30°C
Temperature control	+/- 1°C
Cooling capacity	2000W
Temperature sensor	Shared output from integrated printer sensor (0 – 10V input over 0 – 50°C)
Air in filter	G4 (91% Average Arrestance) EN 779: 2002
Refrigerant gas	R134a 0.75Kg
Full load current	12.6A
Start up current	20A
Frequency	50 / 60Hz
Voltage	230V +/- 10% (207V – 253V working range) Single-phase 1~
Noise level	> 75dBA (at typical operating speed)
Dimensions	1285mm (H) + (beacon 450mm), 540mm (W), 670mm (D)
Condensate	Collected in 5 litre container for disposal or piped to drain
Weight	140Kg
Documentation included	Graphical operator guide, user tech ref manual (on disc), electrical schematic
Approvals	UKCA and CE

## Part numbers

Model	Voltage	Part number	Pre-filter part number
TCU	230V	2310-100	A1030305

## Pre-filter specifications

Filter media	Borosilicate
Filter housing	Cardboard
Filter efficiency	G4 (70% @ 1 microns)

*Datasheet correct at time of publishing.*

*Where applicable, the carbon used in BOFA units is capable of removing a wide range of VOC's, however it is the responsibility of the user to ensure the carbon is suitable for their application. For specific applications, please contact us for details.*

*Think before you print! Please consider the environment before printing this document.*

