

FOX-50 Heat Flow Meter



Site Preparation Guide

Table of Contents

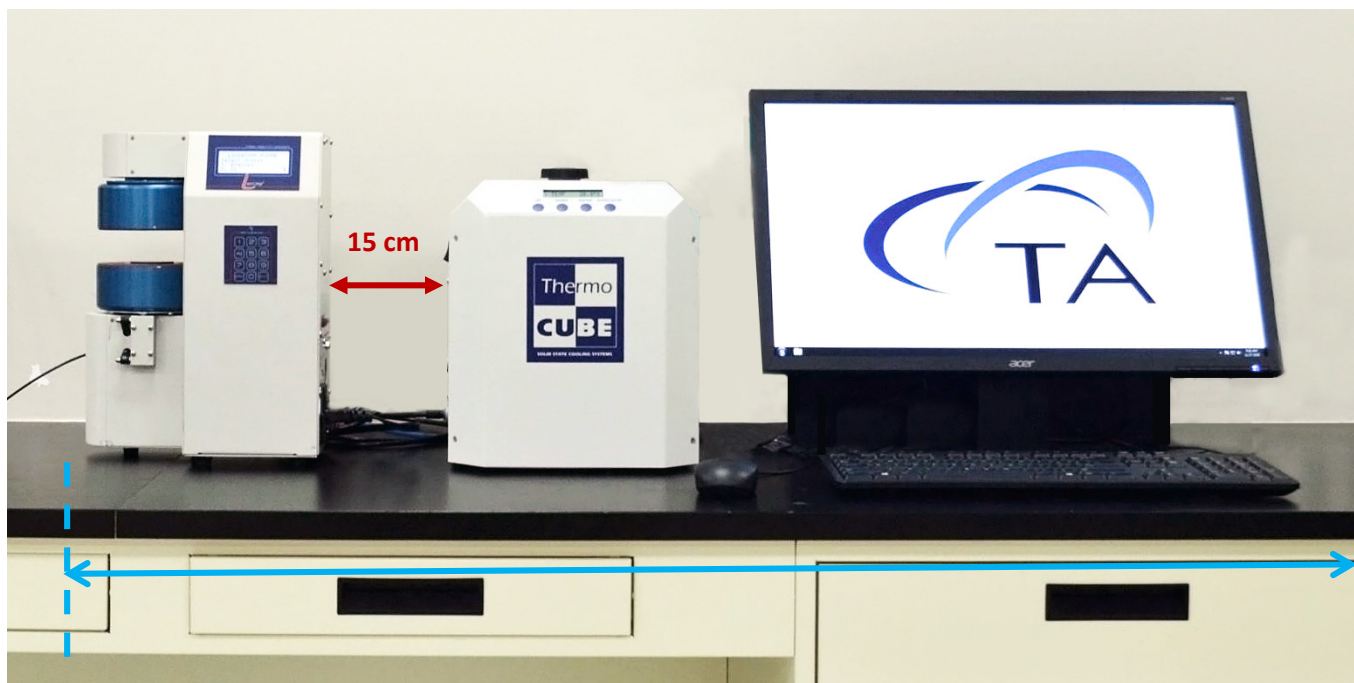
Table of Contents	1
Ideal Setup	2
System Components.....	3
Instrument Measurements	4
Utility Requirements.....	5
Power	5
Gas	6
Water	7
Computer Requirements	8
Site Preparation Checklist	9
TA Instrument Offices.....	10

Ideal Setup



IDEAL PLACEMENT AND BENCH MEASUREMENTS

Select a location with adequate floor space and a rigid laboratory bench that is level and is in a vibration-free environment.

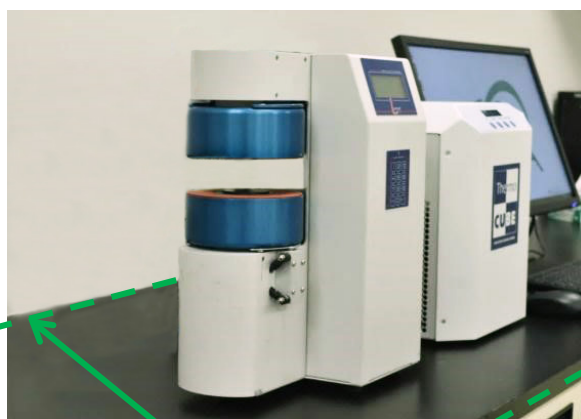


Bench length: 1.4 m (4.5 ft)

Bench depth: 45 cm (18 in)



Allow at least 15 cm (6 in) of **additional** clearance to the right of the instrument for wires, tubing, etc.



System Components



MAIN SYSTEM COMPONENTS



- A. Gas Source
- B. Instrument
- C. Coolant Source
- D. Computer (Controller)

Instrument Measurements



MAIN INSTRUMENT



Height: 38 cm (15 in)

Width: 30 cm (12 in)

Depth: 18 cm (7 in)

Weight: 11 kg (25 lbs)



Utility Requirements



POWER



Instrument

110 VAC or 220 VAC, 5 A, 50/60 Hz

Power cords provided

Instrument (US): NEMA 5-15 plug, 2 m (6.5 ft) long

Instrument (EU): European



European



NEMA 5-15 plug



Use power cords with plugs appropriate for your circuit.



Supply voltages lower than indicated may result in a degradation of performance.



Ensure that the mains assigned do not also supply power to noise generating equipment nearby, such as motors, welders, transformers, etc.



An independent heavy GROUND wire must be provided through the power hookup. Improper grounding may cause severe damage for which the supplier will not accept responsibility. All power strips must be fully grounded and carry the ground through to the sockets into which the computer is plugged.

Utility Requirements



GAS

Requirements

Conditions	Must be dry
Type	Must be nitrogen, air, or argon
Source	Must be from a gas cylinder, Grade 5 purity
Inlet Pressure	60 psig (4.15 bar)
Fittings	Instrument fitting is 5/32". 5/32" tubing is supplied with the instrument.



Regulator to monitor pressure



Nitrogen/Air port



Venting inert gases into small rooms may reduce the oxygen content of the air and become hazardous to personnel.

Utility Requirements



WATER

Requirements	
Inlet Pressure	<ul style="list-style-type: none"> Minimum: 40 psig (2.75 bar) Maximum: 80 psig (5.5 bar) Inlet and Outlet fittings are ¼" →
Nominal Flow Rate	<ul style="list-style-type: none"> 57–75 L/hour Varies with Inlet pressure Excessively cold water may require the reduction of the flow rate. After reaching the desired setpoint, if the temperature changes by more than $\pm 0.01^{\circ}\text{C}$, the flow rate is not correct.
Water Temperature	<ul style="list-style-type: none"> Optimal: 18°C Permissible: 15°C–30°C
Recirculation	<ul style="list-style-type: none"> If plant-wide recirculation is used, a minimum inlet/outlet differential pressure of 50 psig is required. If a chiller/circulator is to be used, it must be placed at the same level as the instrument. ThermoCube chiller (PN 880310.901) is recommended → Wall mounted supply shutoff, open drain, and city water is required if chiller/circulator was NOT ordered.



Outlet and Inlet ports

Computer Requirements



HARDWARE REQUIREMENTS

The FOX-50 must have a PC in order to operate, and requires an unused RS-232 (serial) port OR unused USB port if RS-232 is converted to USB.



Instrument drivers, software, and calibrations are provided on a CD.



Computer should not be attached to other analytical instruments or LAN.







SOFTWARE REQUIREMENTS

Item	Requirement
Network	<ul style="list-style-type: none">• <i>TA Instruments is not responsible for resolving issues associated with connections to your corporate network.</i>• <i>Network cards and/or certain network operation frequently interfere with the operation of the instrument and software.</i>
Conflicts	<i>TA Instruments is not responsible for resolving hardware/software conflicts created by the addition of third party hardware or software to the computer.</i>

Site Preparation Checklist



FOX-50

	Sufficient bench space for instrument, computer, and recirculator (if needed): <input type="checkbox"/> Width: 1.40 m (4.5 ft) <input type="checkbox"/> Depth: 45 cm (18 in)
	<input type="checkbox"/> Instrument power is 115–220 VAC, 5 A, 50/60 Hz
	Air/Gas Input – Dry nitrogen, air, or argon <input type="checkbox"/> Grade 5 purity cylinder <input type="checkbox"/> Regulator set to 60 psi (4.15 bar)
	Water Circulation <input type="checkbox"/> Nominal inlet pressure of 60 psig (4.0 bar) <input type="checkbox"/> Nominal flow rate of 57–75 L/hour <input type="checkbox"/> Optimal coolant temperature of 18°C <input type="checkbox"/> Filtered or clean and debris-free <input type="checkbox"/> ThermoCube chiller OR wall-mounted supply shutoff, open drain, and city water

I hereby acknowledge that all utility requirements have been met per the checklist above and that they will be ready at the agreed time of installation.

If all utility requirements are not met at the agreed time of installation, additional charges may be incurred for a return Service trip.

Customer DD / MM / YYYY

Company City State Country

Please send a signed copy of the completed checklist to your local Service representative.

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