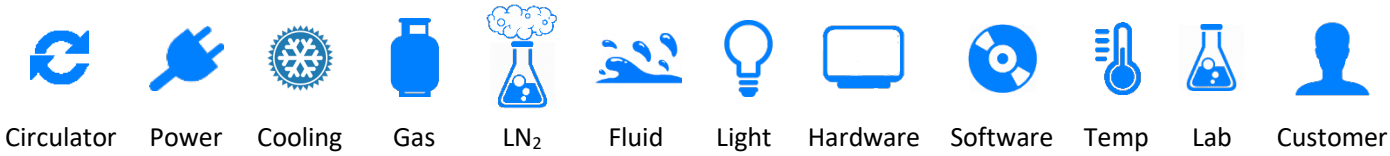
FOX-50 Heat Flow Meter

Site Preparation Guide

Revision C Issued September 2024

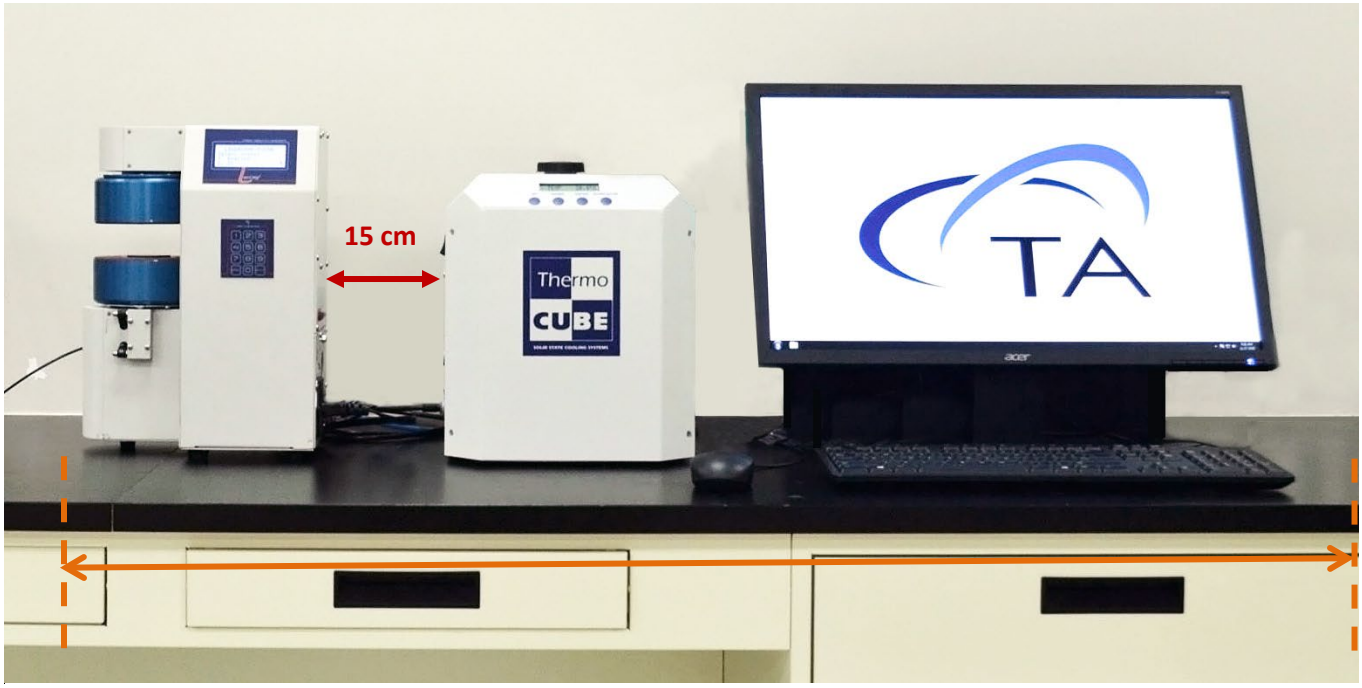
Table of Contents



Ideal Setup

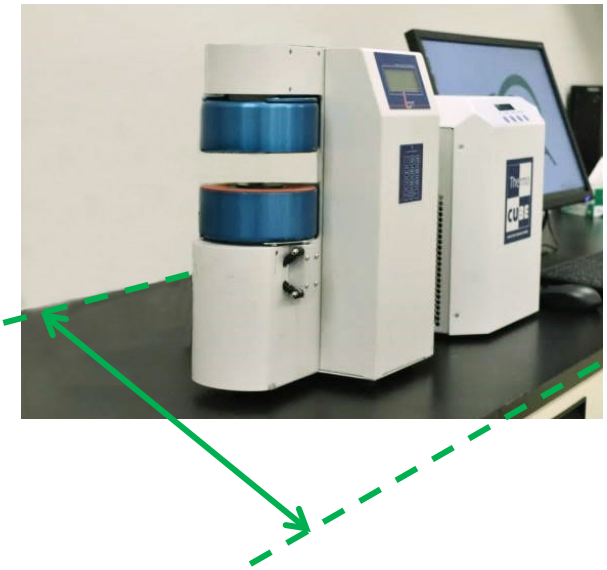
IDEAL PLACEMENT AND BENCH MEASUREMENTS

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



Bench width: 1.4 m (4.5 ft)

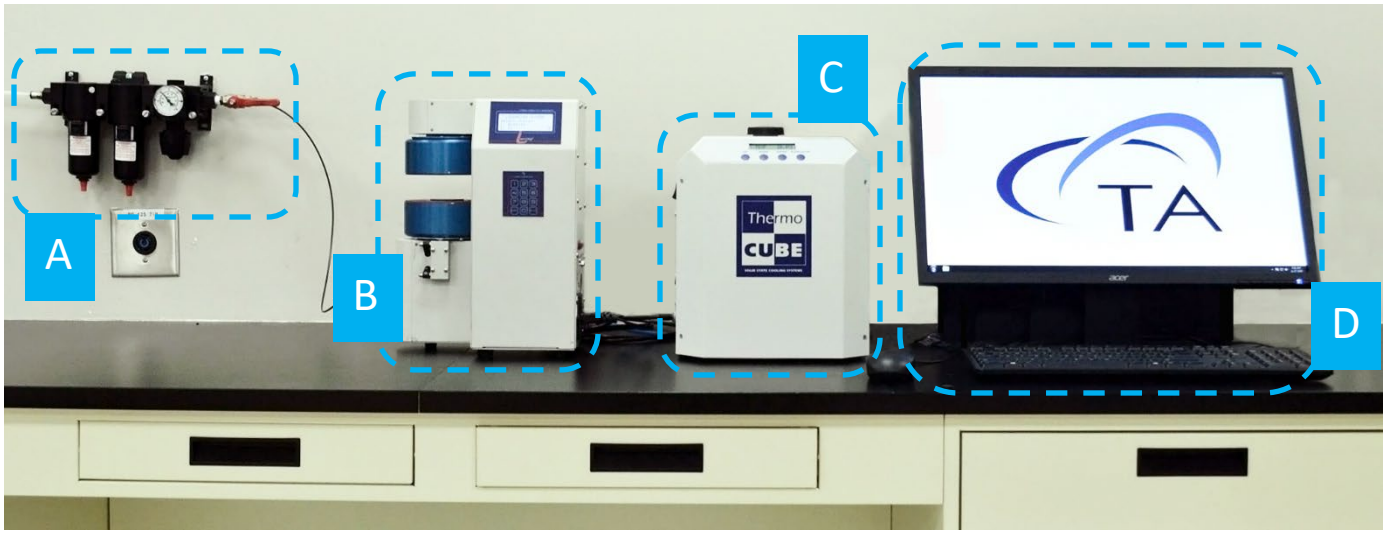
Bench depth: 45 cm (18 in)



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

Item	Requirement
Instrument	110 VAC or 220 VAC, 5 A, 50/60 Hz
Power cords provided	• NEMA 5-15 plug, 2 m (6.5 ft) long • Type F plug  Type F  NEMA 5-15

CAUTION **Use power cords with plugs appropriate for your circuit.**

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

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

Instrument power

CAUTION 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

Item	Requirement
Conditions	Must be dry
Type	Must be **nitrogen**, **air,** or **argon**
Source	Must be from a **gas cylinder**, filtered
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

CAUTION

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

Utility Requirements

WATER

Item	Requirement
Inlet Pressure	• Minimum: 17 psig (1.17 bar) • Maximum: 50 psig (3.4 bar) • Inlet and Outlet fittings are ¼” 
Nominal Flow Rate	• 75–90 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 ± 0.01°C, the flow rate is not correct.
Water Temperature	Recommended: **18°C**
Recirculation	• 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 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	• *TA Instruments is not responsible for resolving issues associated with connections to your corporate network.* • *Network cards and/or certain network operation frequently interfere with the operation of the instrument and software.*
Conflicts	*TA Instruments is not responsible for resolving hardware/software conflicts created by the addition of third party hardware or software to the computer.*

Site Preparation Checklist

FOX-50

	Sufficient bench space for instrument, computer, and recirculator (if needed): ☐ Width: 1.40 m (4.5 ft) ☐ Depth: 45 cm (18 in)
	☐ Instrument power is 115–220 VAC, 5 A, 50/60 Hz
	Air/Gas Input – Dry nitrogen, air, or argon ☐ Filtered gas/air from a compressor. NOTE: Cylinders must be refilled; the instrument will not run if the gas/air runs out ☐ Regulator set to 60 psi (4.15 bar)
	Water Circulation ☐ Nominal inlet pressure of 17–50 psig ☐ Nominal flow rate of 75–90 L/hour ☐ Optimal coolant temperature of 18°C ☐ Filtered or clean and debris-free ☐ ThermoCube chiller
	☐ PC (required to operate instrument) with unused RS-232 (serial) port OR unused USB port if RS-232 is converted to USB
	☐ The Customer assumes responsibility for any damage that occurs when the instrument is moved by someone other than a trained TA Instruments Service Representative.

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.

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

_____ / _____ / _____

Customer *DD* *MM* *YYYY*

_____ _____ _____ _____

Company *City* *State* *Country*

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

TA Instruments Offices

For information on our latest products, contact information, and more, see our website at: http://www.tainstruments.com.

To find your local TA Instruments office and contact information, visit http://www.tainstruments.com/contact/ta-directory/

TA Instruments – Waters LLC
Corporate Headquarters
159 Lukens Drive
New Castle, DE 19720
USA

Telephone: 302-427-4000
Fax: 302-427-4001
Email: info@tainstruments.com