



QUICK SET UP GUIDE LX-5085-QS



**Q-SUN Xe-2
Xenon Test Chambers**



Revision Date

15 Jun 2022

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1. Specifications, Classifications, Symbols (Jun 2022)

Specifications, Classifications

- The recommended ambient operating temperature and relative humidity (RH) for the Q-SUN® Xe-2 tester is 23 ± 5 °C and $50 \pm 25\%$ RH.
- The maximum ambient operating temperature and humidity is 40 °C and 80% relative humidity.
- Temperatures outside the recommended range may cause chamber temperature and/or humidity faults.
- Transportation and Storage Temperature: -40 °C to 80 °C.
- Installation Category: Category II for transient over-voltages.
- Pollution Control: Pollution Degree 2.
- Sound Pressure Level: Sound Pressure Level does not exceed 75 dBA.
- Altitude: 2000 meters or less.
- Operation: Continuous Rating.
- Supply Connection: Permanently connected or plug/socket connection (industrial type per IEC 6309 or twist lock type in North America).
- External Disconnect: Required for all connections.
- External Over-Current Protection: Must be rated for not more than 40 A (USA, Canada) or 64 A (Europe).
- Short Circuit Current Rating (SCCR): 1000 A.

Symbols



Electrical Shock Hazard



Hot Surfaces Hazard



Attention



Finger/Hand Crushing Hazard



Local waste & recycling regulations per the WEEE Directive 2002/96/EC on Waste Electrical and Electronic Equipment

2. Safety Information

Q-Lab accepts no responsibility for the consequences if the user fails to comply with the instructions in this operating manual. Q-Lab will accept responsibility for defective parts or components only if the machinery was defective at the time that the tester was shipped.

- This manual does not claim to address potential safety issues, if any, associated with the use of this product.
- It is the responsibility of the user of this manual to establish appropriate safety and health practices, and to determine the applicability of regulatory limitations prior to use.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment safety devices may be impaired.
- The Q-SUN meets the European Low Voltage Directive 2014/35/EU and complies with the requirements of EN 61010-1: 2010 (Third Edition), "Safety of Electrical Equipment for Measurement, Control and Laboratory Use".
- The Q-SUN meets the European Electromagnetic Directive 2014/30/EC and complies with the requirements of EN 55011:2007 Radiated and Conducted Emissions – class A.
- Use only parts that have been supplied or recommended by Q-Lab.

2.1 Heat and Electrical Shock Hazards (Jun 2022)

Warning Labels

- **Warning:** If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Doors (Figure 2.1a) provide access to tester interior spaces containing heat generating and/or electrical components.
- Warning labels indicate heat and electric shock hazards inside the Q-SUN tester (Figure 2.1a and Figure 2.1b).



Figure 2.1a: Tester access door locations.

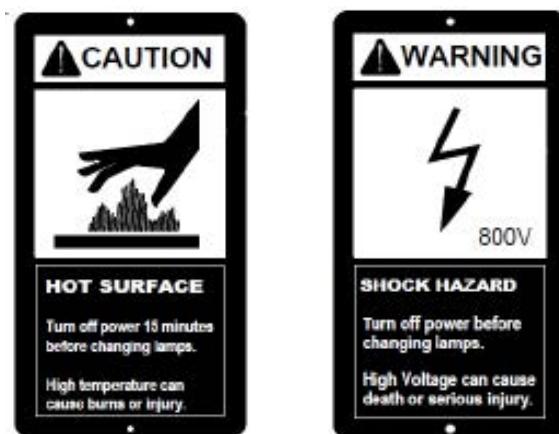


Figure 2.1b: Hot surface and shock hazard warning labels.

Inside the Lamp Door

- **IMPORTANT:** Always shut off the Xe-2 power switch before opening the lamp door.
- The Xe-2 high-voltage xenon lamp is located under the lamp door on top of the machine.
- For safety, a tool (slotted screw driver) must be used to open the door (Figure 2.1c).
- Figure 2.1d shows safety labeling and electrical components.
- An interlock switch (Figure 2.1d) turns off lamp power when the lamp door is opened.
- The xenon lamp is very hot. Wait 15 minutes after stopping the machine to remove the lamp.



Figure 2.1c: Lamp door located on top of the Xe-2 cabinet.

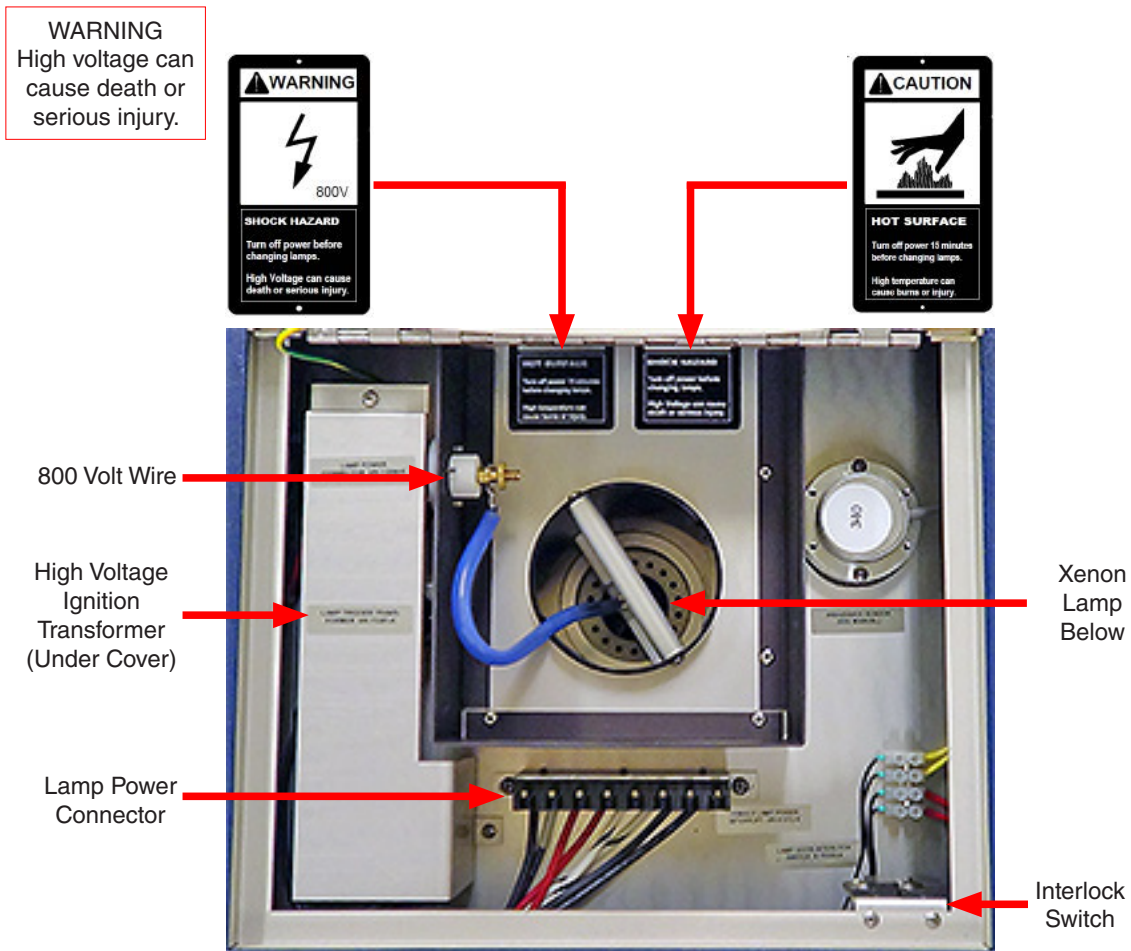


Figure 2.1d: Inside the lamp door.

Inside the Chamber Door

- Items located in the test chamber, including specimens and holders, can be very hot.
- Let the test chamber cool before opening the chamber door.



Figure 2.1e: Opening chamber door.

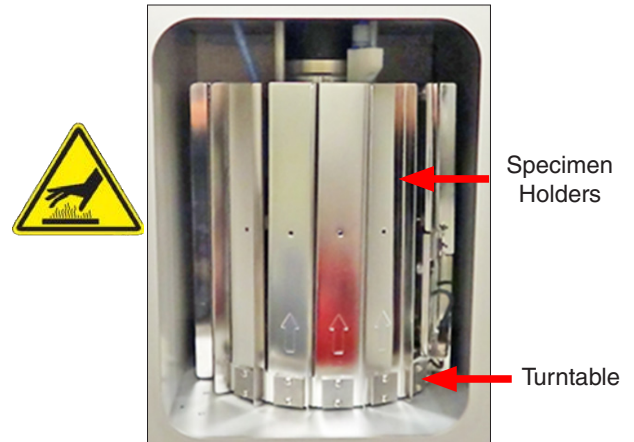


Figure 2.1f: Test chamber interior showing specimen holders on turntable.

Inside the Side Doors

- For safety, a tool (slotted screw driver) must be used to open these doors.
- Electrical and heat generating components and safety labels are located throughout.



Figure 2.1g: Inside Left Door



Figure 2.1h: Inside Right Door

2.2 Ultraviolet and Infrared Hazards (Nov 2020)

Chamber Door

- The Xe-2 xenon lamp can cause severe sunburn, eye inflammation, and damage to your vision.
- Touch the stop icon on the Status Screen (Figure 2.2a) before opening the chamber door (see Section 12.2 for more information on the Status Screen).
- An interlock switch (Figure 2.2b) shuts off power to the lamp when the test chamber door is opened.

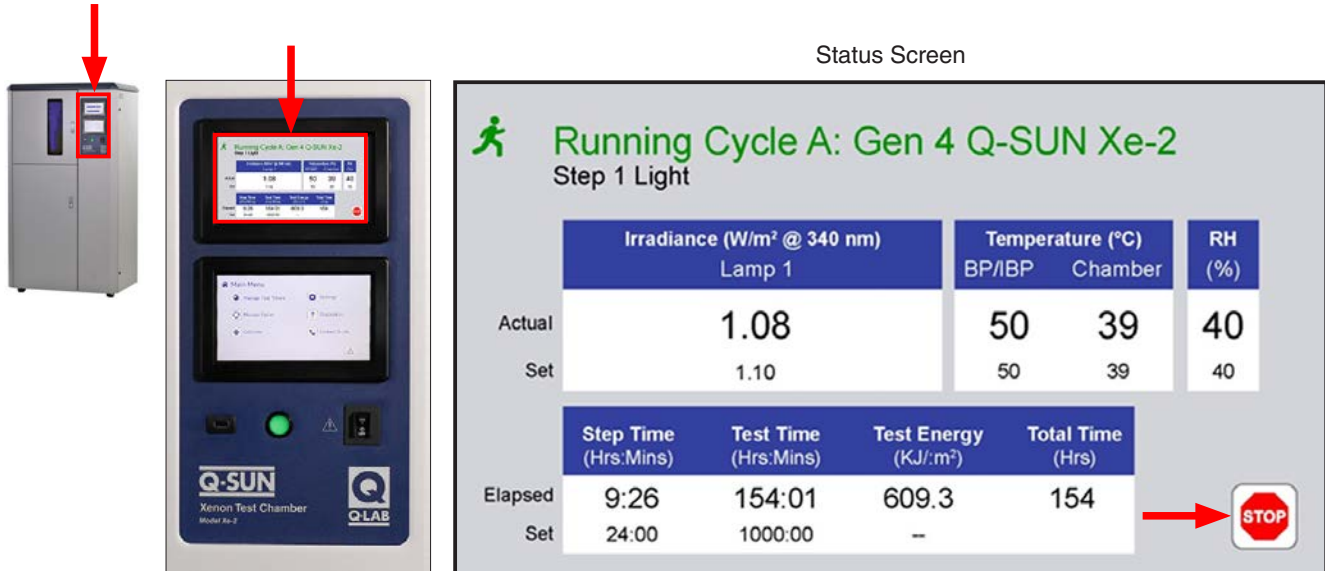


Figure 2.2a: Stop icon on the Status Screen.

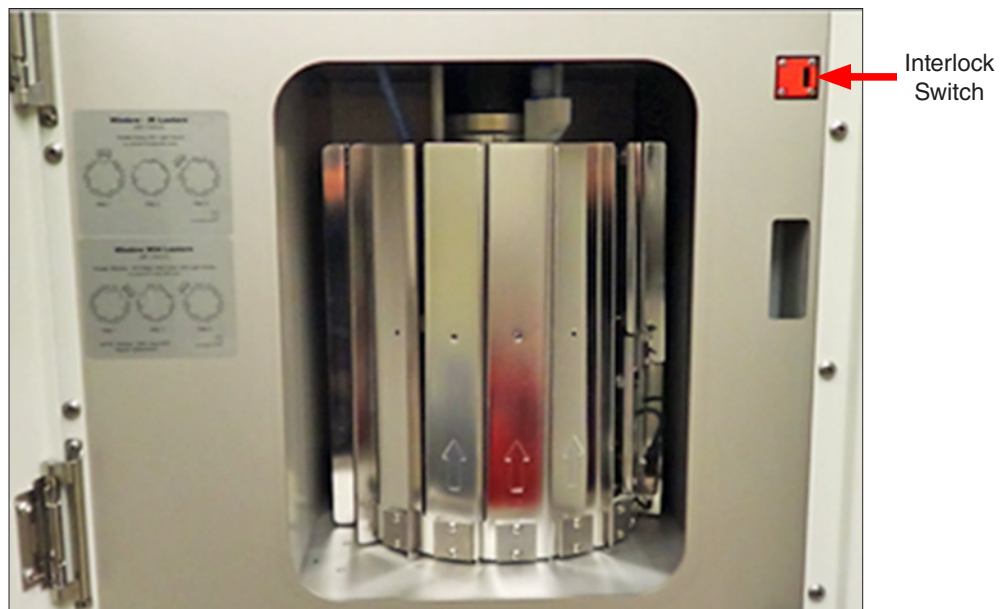


Figure 2.2b: Test chamber door opened to show interlock switch location.

3. General Description (Apr 2022)

- This Quick Set Up Guide is not a Technical Manual.
- This document is intended to explain only the basics of uncrating and setting up a Q-SUN Xenon Test Chamber.
- *LX-5085-TM Q-SUN Xe-2 Technical Manual* is necessary for a complete understanding of how to operate the Q-SUN Xe-2 Xenon Test Chamber.

Overview

- The Q-SUN Xe-2 is equipped with an air-cooled xenon arc lamp to test the lightfastness of textiles as well as many other materials.
- The Xe-2 is designed to meet ISO 105-B02, ISO 105-B04, AATCC Test Method 16, and many other test methods.
- All Xe-2 testers have a rotating specimen rack and provide precise control of critical test parameters including irradiance level, black panel temperature, chamber air temperature, and relative humidity.
- The Xe-2 can be configured using one of a number of different optical filter types.
- Front water spray (Xe-2-HSE) and front water spray with back spray (Xe-2-HBSE) options are available.
- All Q-SUN Xe-2 models are “E” models that feature enhanced performance, including dual touchscreen control and longer lamp life or higher irradiance capability.

Q-SUN Xe-2 Models Description

- This document covers the Q-SUN Xe-2 models shown here:

Model	Configuration
Xe-2-HE	H: Humidity Control
Xe-2-HSE	S: Front Spray
Xe-2-HBSE	BS: Back Spray (in addition to Front Spray)

Disposal

- When disposing of the Q-SUN Xe-2, please follow your local regulations.
- This equipment must be properly disposed of at end-of-life by means of an authorized waste management system.

4. Operating Environment



The Tester Must Be Located in a Suitable Environment

- All Q-Lab test chambers are sophisticated scientific instruments.
- All tester models must be operated in a suitable controlled environment ([Section 4.1](#)).
- Operating the tester in an unsuitable environment ([Section 4.2](#)) will void the warranty.

4.1 Suitable Environments (May 2020)

Ambient Laboratory Temperature and Humidity

- The recommended ambient operating temperature and relative humidity (RH) for Q-SUN testers is 23 ± 5 °C and $50 \pm 25\%$ RH.
- Operating outside the recommended range (or in rare cases, even within it), certain standards or test cycle conditions may not be achievable.
- Operating outside the recommended range can result in the tester producing chamber temperature and/or humidity faults.
- Never operate your tester in lab temperatures >40 °C or $>80\%$ RH.
- Consult with Q-Lab for more specific information about achievable chamber temperature/humidity values based upon various ambient lab conditions.

Physical Environment

- A room that is dry, clean, and free of dust, particles, gases, or salt fog.
- A room with an HVAC (heating/ventilation/air-conditioning) system.
- A location away from windows or HVAC vents.
- A location that provides the necessary minimum clearances as specified in [Section 6.1](#).

4.2 Unsuitable Environments (Mar 2019)

Salt Fog or Other Airborne Contamination

- Operating the tester in an unsuitable environment will void the warranty.
- Do Not install Q-SUN testers in a room with Q-FOG or any other corrosion chambers (Figure 4.2a).
- Do Not locate Q-SUN testers in a room with machines or processes that generate dust, particles, vapors, gases, etc (Figure 4.2b)



Figure 4.2a: Do Not Install Xe-2 Testers in a Room with Corrosion Chambers



Figure 4.2b: Do Not Locate Tester in Room with Airborne Dust, Particles or Gases

Uncontrolled Temperature and Humidity

- Do not operate the tester in a room with uncontrolled temperature and humidity (Figure 4.2b).
- Do not locate tester near sources of cold or hot air (Figure 4.2d).

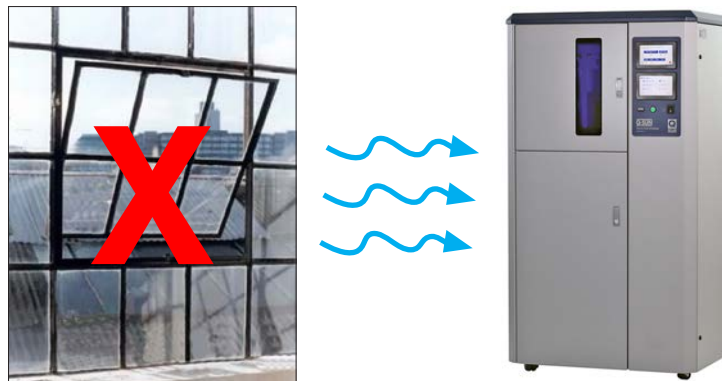


Figure 4.2c: Do Not Locate Testers Near Open Windows

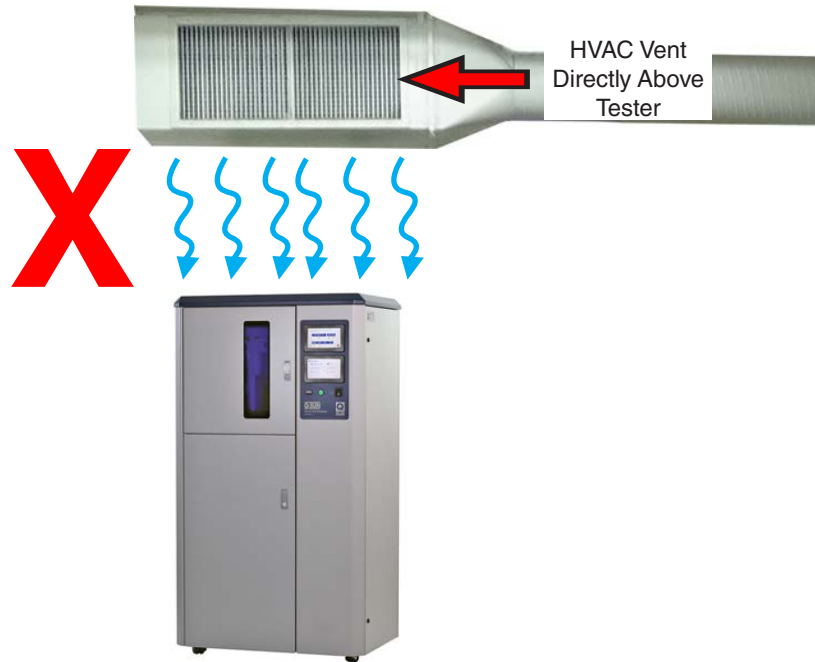


Figure 4.2d: Keep Tester Away from Sources of Hot or Cold Air

Other Unsuitable Environments

- **Outdoors:** Rain and dust will corrode or short out electrical components.
- **Metal Dust / Metal Chips:** Do not locate the tester near metal cutting machines or metal grinding machines. Conductive metal dust or metal chips in the air will damage electronic components.
- **Carbon Fibers:** Do not operate the tester where carbon fibers or carbon reinforced plastic are being cut. The conductive carbon fibers will damage electronic components.
- **Conductive Pigments:** Do not operate the tester where carbon black or other conductive pigment dust is in the air. The conductive dust will damage electronic components.
- **Other Corrosive Gases:** Do not expose the tester to acid fog, SO₂ gas, or other corrosive gases.
- **Excessive Voltage:** The electrical supply to the tester must be no more than 10% higher than the voltage listed on the nameplate.
- **Low Voltage:** Recurring “brown-outs” or voltages less than 90% of the rated voltage will damage electrical components.
- **Water Leaks from Ceiling:** Water leaking onto the tester will damage electrical components.

For further detail on laboratory environment requirements, please contact Q-Lab Repair and Tester Support. See [Section 9](#) for contact information.

5. Uncrating (Mar 2022)

- Q-SUN Xe-2 testers are shipped in one of two types of crates (Figure 5a and Figure 5b).
- Labels on the crate indicate the location of the instructions to be opened first (Figure 5c).
- Instructions for uncrating and setting up the tester are located in the envelope shown in Figure 5d.



**Carefully read these instructions before uncrating the tester.
Follow all local, OSHA, EHS, and other applicable equipment handling safety requirements, recommendations, and practices.**

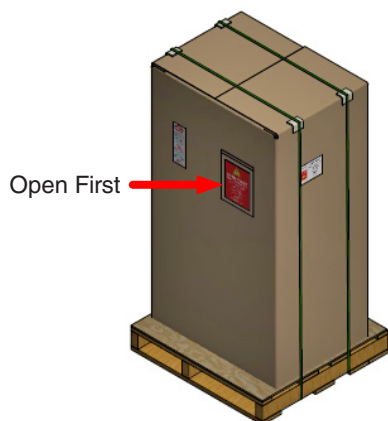


Figure 5a: This Crate has a Carton Banded to a Wooden Skid.

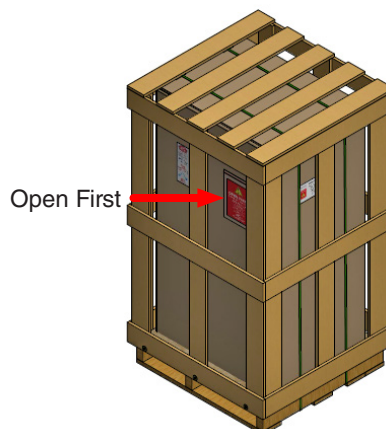


Figure 5b: This Crate has a Wooden Frame Surrounding the Carton.



Figure 5c: Labels on the crate indicate the envelope to be opened first.



Figure 5d: Open this envelope for important uncrating instructions.

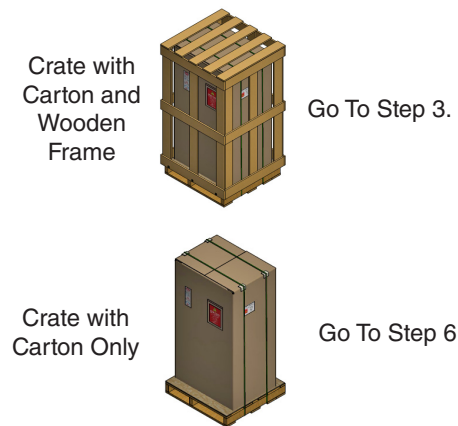
Weights

	Crate with Carton Only	Crate with Carton and Wooden Frame
Shipping Weight (Approximate):	182 kg (402 lb)	227 kg (500 lb)
Machine Weight:	172 kg (379 lb)	172 kg (379 lb)

Tools Required

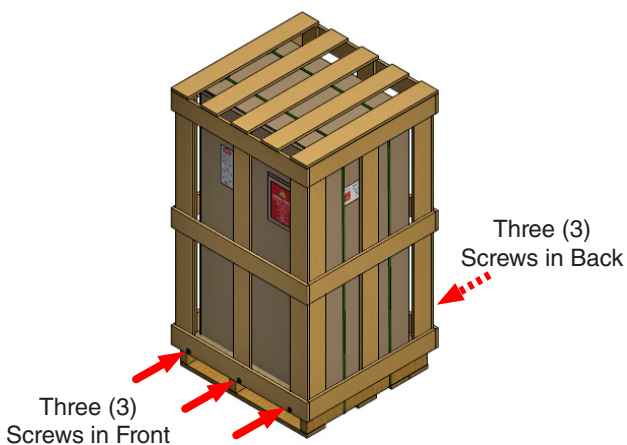
Medium Phillips Screwdriver (Crate with Wooden Frame Only)		Flat Blade Screwdriver
Pry Bar (Crate with Wooden Frame Only)	Ratchet and 15 mm (9/16") Socket	Small Ladder or Step Stool
Band Cutter	Utility Knife	Fork Lift*

*A fork lift or other mechanical lifting device is recommended for use in moving the crated tester to the installation location, and to lift the frame in one piece from the crate with wooden frame.

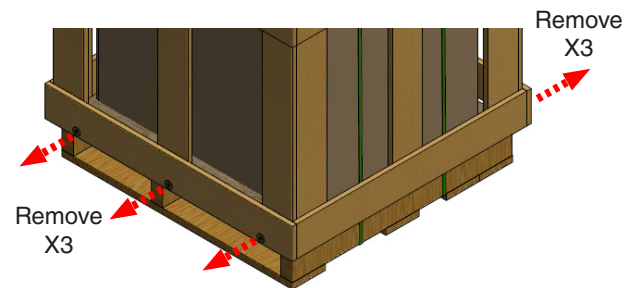


1. Uncrating instructions are located in this envelope. Remove and read the instructions.

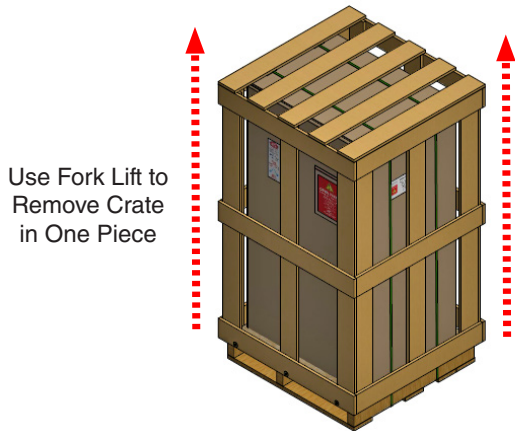
2. For crate with wooden frame continue with Step 3. For crate with carton only, go to Step 7.



3. Locate the six (6) Phillips screws in the bottom front and back horizontal boards.

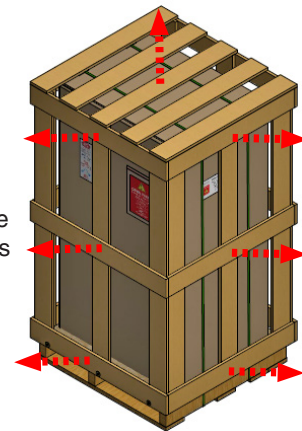


4. Remove all six (6) screws.



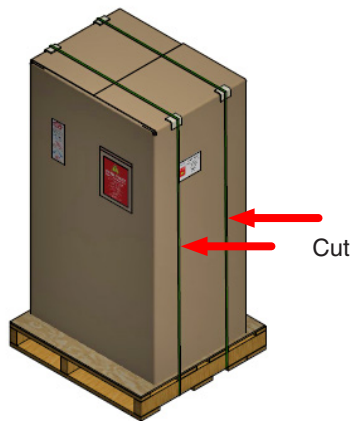
Use Fork Lift to Remove Crate in One Piece

5. If a fork lift is available, use it to carefully lift the wooden frame up and off of the tester.



Or Use Pry Bar to Remove Crate in Pieces

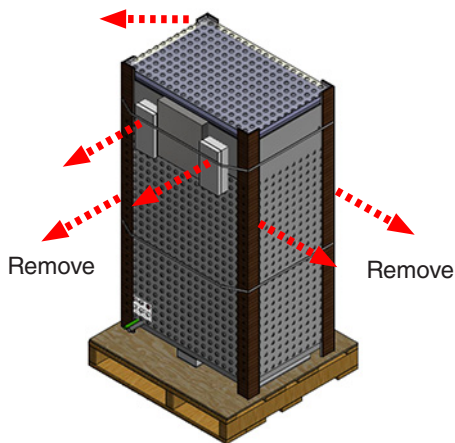
6. If a fork lift is not available, use a pry bar to carefully remove the horizontal and vertical wooden pieces off of the tester.



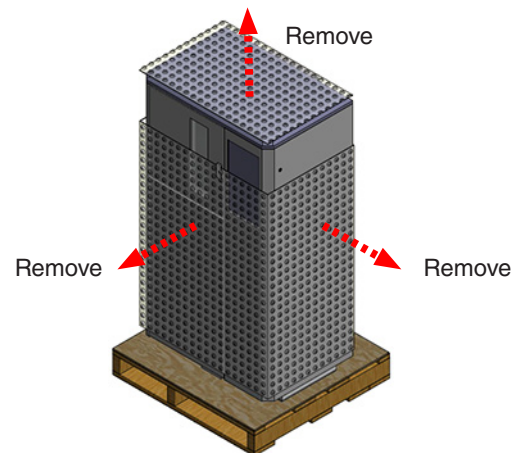
7. Cut the bands holding the carton to the skid. Remove the bands.



8. Carefully lift the carton up and off of the tester.



9. Remove all plastic wrap, four (4) cardboard corner posts, and foam blocks.

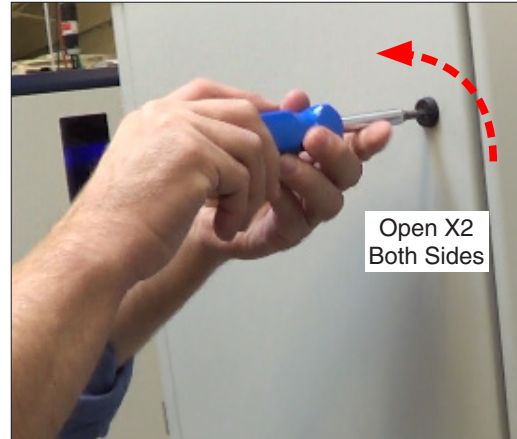


10. Remove all bubble wrap from around the tester.

Section 5. Uncrating



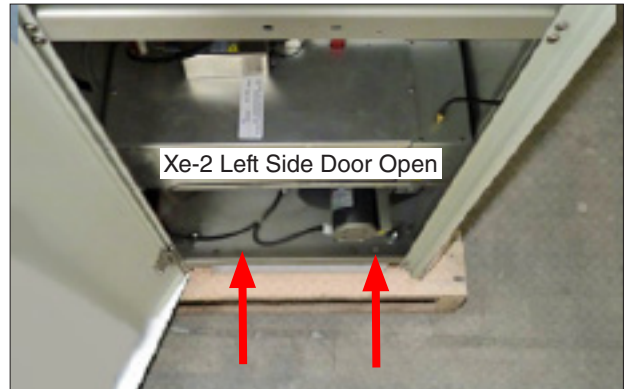
11. Locate two (2) latches on the left side door and two (2) latches on the right side door of the tester.



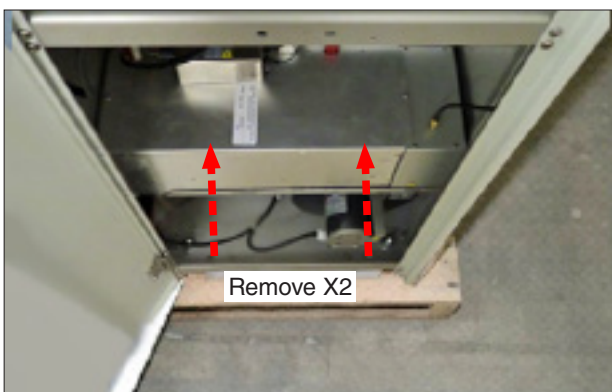
12. Open two (2) latches on the left side door and two (2) latches on the right side door of the tester.



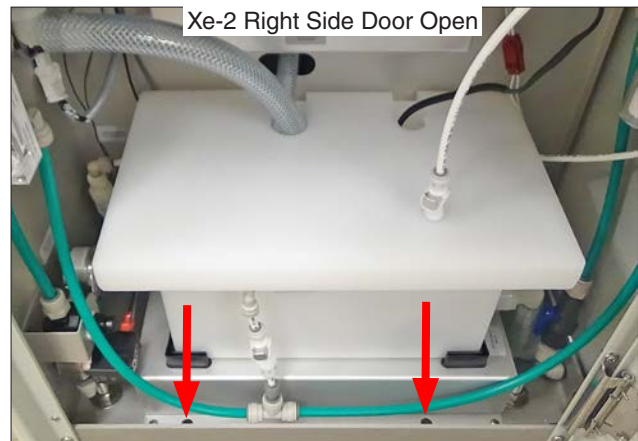
13. Open the left side door and the right side door of the tester.



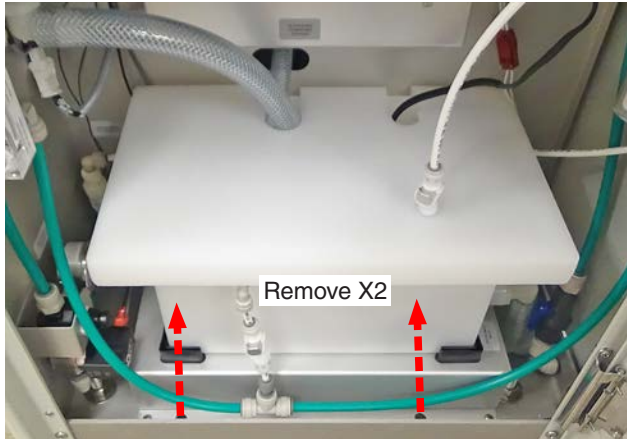
14. Locate the two (2) nuts and bolts holding the tester to the skid on the bottom left side.



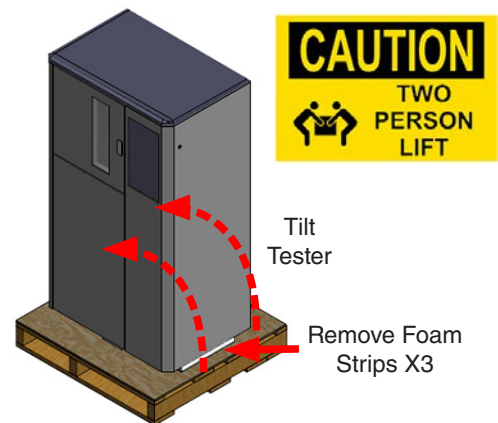
15. Remove the two (2) nuts and bolts holding the tester to the skid on the left side.



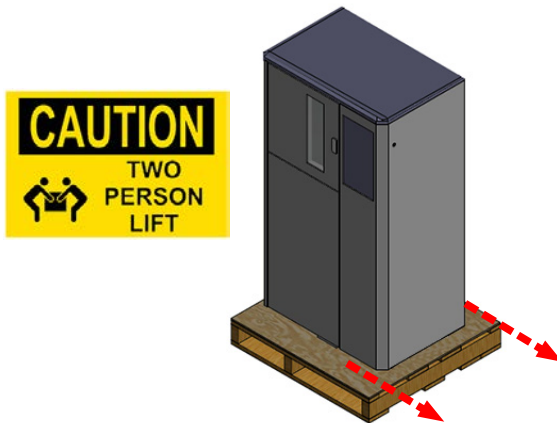
16. Locate the two (2) nuts and bolts holding the tester to the skid on the bottom right side.



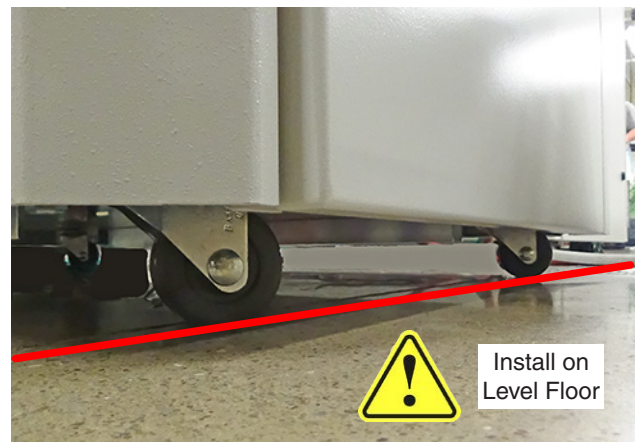
17. Remove the two (2) nuts and bolts holding the tester to the skid on the right side.



18. At least two people are needed to move the Xe-2. Carefully tilt the tester and remove the three foam strips under the tester.



19. The Xe-2 is equipped with casters. Carefully roll the tester off the skid.



20. Make sure the tester is installed on a level floor.

Optional Lift Kit



IMPORTANT: The casters must be removed if an optional Q-SUN lift kit is installed.

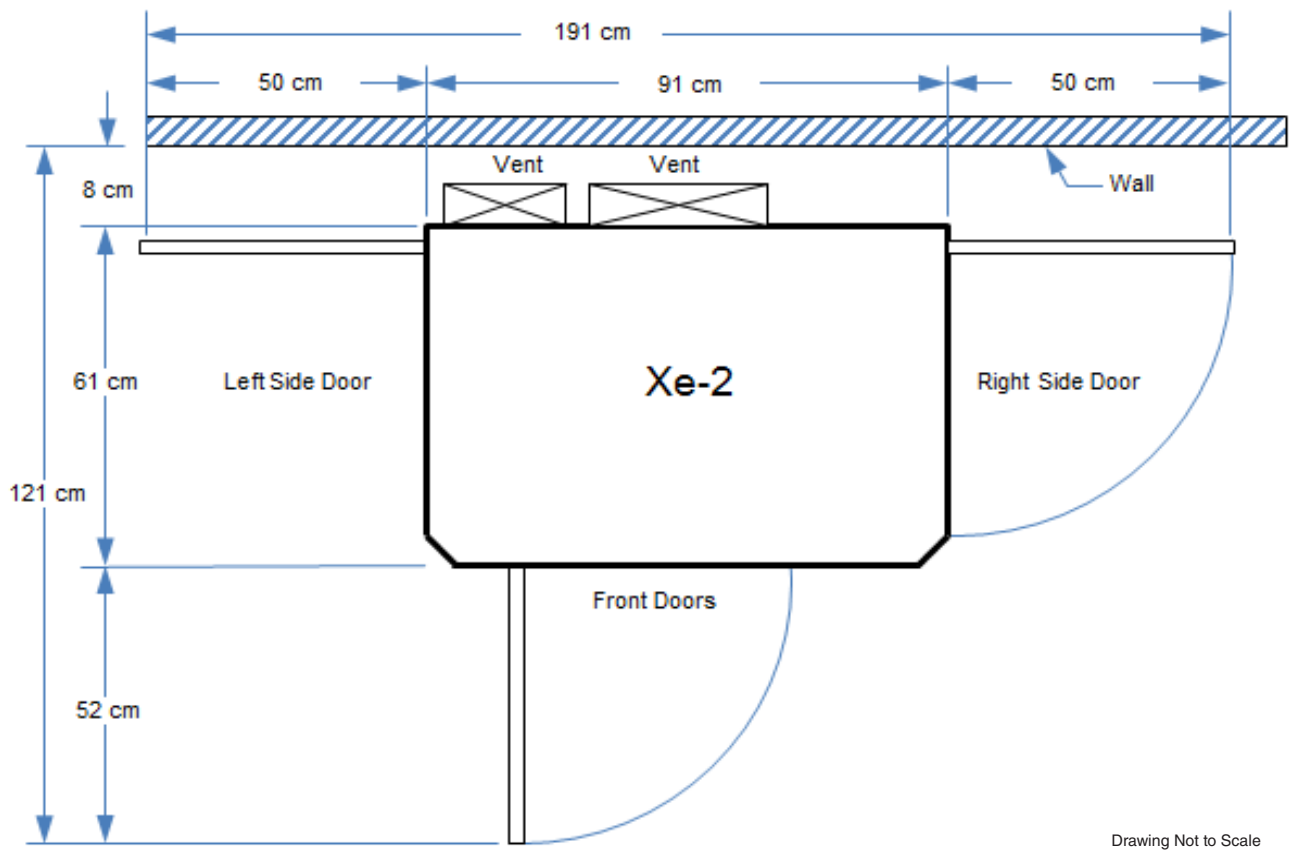


21. Remove any adhesive tape and accessory boxes from the inside and outside of the tester.

6. Setup

6.1 Dimensions and Space Requirements (Mar 2022)

- The Q-SUN Xe-2 uses room air for cooling.
- The tester does not require its own vent hood or ducting. Do not attach to a powered vent.
- The Q-SUN Xe-2 exhausts about 1800 W (6141 BTU/hr) of heat into the room.
- Allow adequate space around the tester for air flow and to access tester components (Figure 6.1).



Drawing Not to Scale

6.2 Electrical (Jun 2022)

Specifications

Voltage	All Models	230 V or 208 V \pm 10% - single phase
Current		23 A @ 230 V, 24 A @ 208 V
Frequency		50 or 60 Hz
Installation		Rated as Installation (Over voltage) Category II for transient over voltages.
SCCR*		1000 A

* Short Circuit Current Rating

Figure 6.2a: Electrical Specifications

Voltage

- The Q-SUN Xe-2 comes in 208 V single phase or 230 V single phase (Figure 6.2a).
- The voltage is specified when the tester is ordered.
- The input voltage and current rating are shown on the nameplate at the rear of the tester (Figure 6.2b).
- The voltage supplied to the tester must be within $\pm 10\%$ of the voltage rating of the tester and the circuit must be capable of supplying the rated current.

Connections



A power plug IS NOT SUPPLIED with Q-SUN Xe-2 testers. The user must supply and attach a properly-sized plug to connect the Xe-2 to the Main Power Supply.

- Q-SUN Xe-2 testers are provided with a 3 conductor, 10 AWG, \approx 4.5 m (15') long power cord without plug.
- A qualified electrician should make all electrical connections.

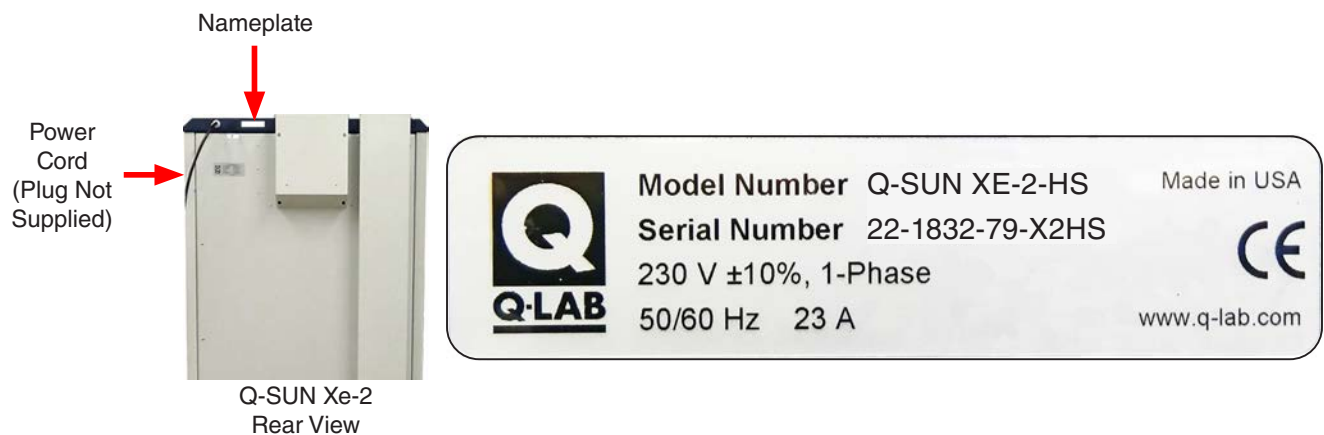


Figure 6.2b: Tester voltage and current shown on nameplate.

6.3 Water (Mar 2022)

Overview

- Purified water must be supplied to all Q-SUN Xe-2 testers.
- Water is used by the humidifier to produce humidity.
- Water is also used to spray on the test specimens in Xe-2 models with water spray.
- Q-SUN models with water spray require much higher water purity than those with a humidifier and no water spray.
- Reverse osmosis / deionized (RO/DI) water is **required**.
- The Q-SUN tester warranty is voided if water purity conditions are not met.

Specifications

System (Model)	Inlet Pressure	Flow Setting	Resistivity	Conductivity	Silica	Total Dissolved Solids	pH
Front Spray (Xe-2-HSE)	30-80 psi (207-522 kPa)	0.5L/min	> 5 M Ω•cm	< 0.2 μS/cm	< 0.1 ppm	< 0.1 ppm	6-8
Front and Back Spray (Xe-2-HBSE)		5 psi	> 5 M Ω•cm	< 0.2 μS/cm	< 0.1 ppm	< 0.1 ppm	6-8
Humidifier (Xe-2-HE)	3-80 psi (21-552 kPa)	1.0 L/hr	> 200 k Ω•cm	< 5.0 μS/cm	Not Important	< 2.5 ppm	6-8

NOTE: Average Daily Volume is dependent on individual test cycles. See [Section 11](#).

Figure 6.3a: Q-SUN Xe-2 water purity requirements.

Reverse Osmosis / Deionization System

The reverse osmosis / deionized (RO/DI) water system described on the next page produces water pure enough for spray systems. **This type of RO/DI system is required for water spray in Xe-2 testers.**



Use Type I, not Type II anion in the mixed bed tanks of the DI system.

The Strong Base **Type I** Anion resin in the mixed bed tanks is the most important part of these systems to prevent water spotting. This is because strong base Type I anion resin is the only resin that can effectively remove suspended silica. **Suspended silica is the major cause of specimen spotting.** Type I anion is much better at removing suspended silica than Type II. Unfortunately, Type II is the most common anion. So be sure to insist that your water purification supplier installs Type I, not Type II. The cost for Type I anion is about the same as Type II.

Type I anion is only necessary in the mixed bed “polishing” stages of the deionization ([Figure 6.3b](#), Stage E), not in the initial “rough” purification stages.



Flush out the water supply line prior to connecting to the Xe-2 tester.

- Figure 6.3b below shows an effective Reverse Osmosis / Deionized Water System with Anion Type I Resin for spray water silica removal.
- For information on water purification systems, contact the Life Science business of Merck KGaA, Darmstadt, Germany. The Life Science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the USA and Canada.

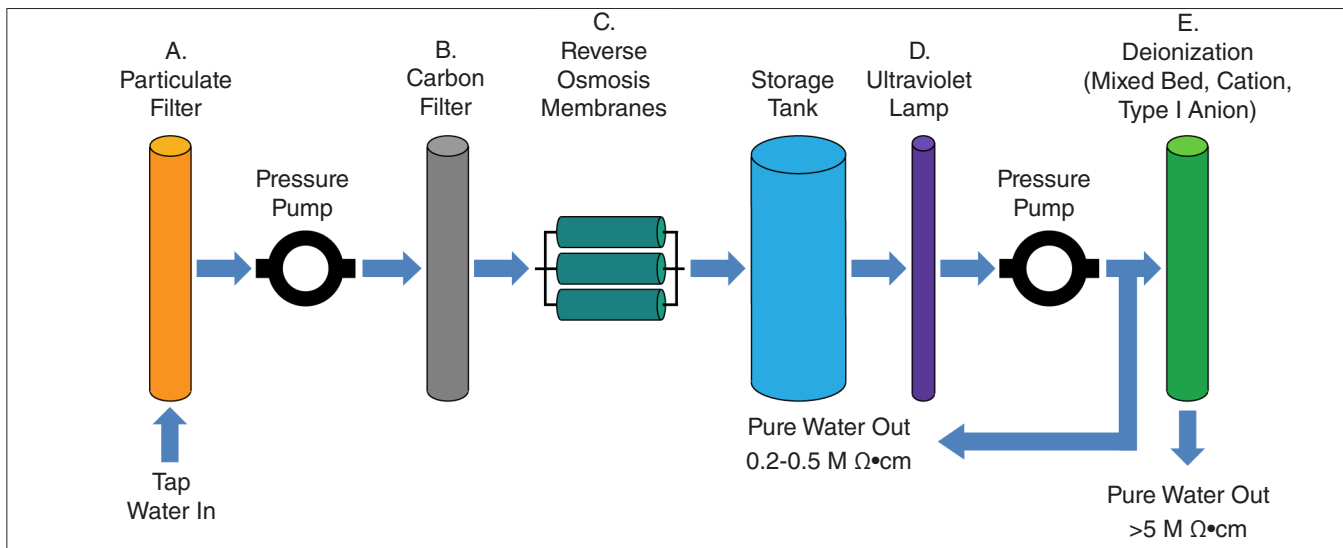


Figure 6.3b: Reverse Osmosis / Deionized Water System.

Additional RO/DI System Information

Stage	Purpose	Outgoing Purity	Notes
A. Particulate Filter	Remove small particles		Replace once per year
B. Carbon Filter	Remove chlorine		Replace once or twice per year
C. R/O Membranes	Remove dissolved solids, colloidal silica, organic and biological contaminants	0.2-0.5 M Ω•cm	Rough purification stage
D. Ultraviolet Lamp	Disinfect water		Rough purification stage
E. Mixed Bed Tank	Final polishing to remove positively and negatively charged ions	> 5 M Ω•cm	Final polished water purity

Supply Connection



Purified water is required.

- The water supply connection is made at the lower rear of the tester (Figure 6.3c).
- The Xe-2 is supplied with 3/8" (9.5 mm) and 10 mm water supply fittings in kit XR-11358-K (Figure 6.3d).
- A water supply tube is not supplied with the tester.
- Example water supply connections are shown in Figure 6.3e through Figure 6.3h.



Figure 6.3c: Water supply connection.

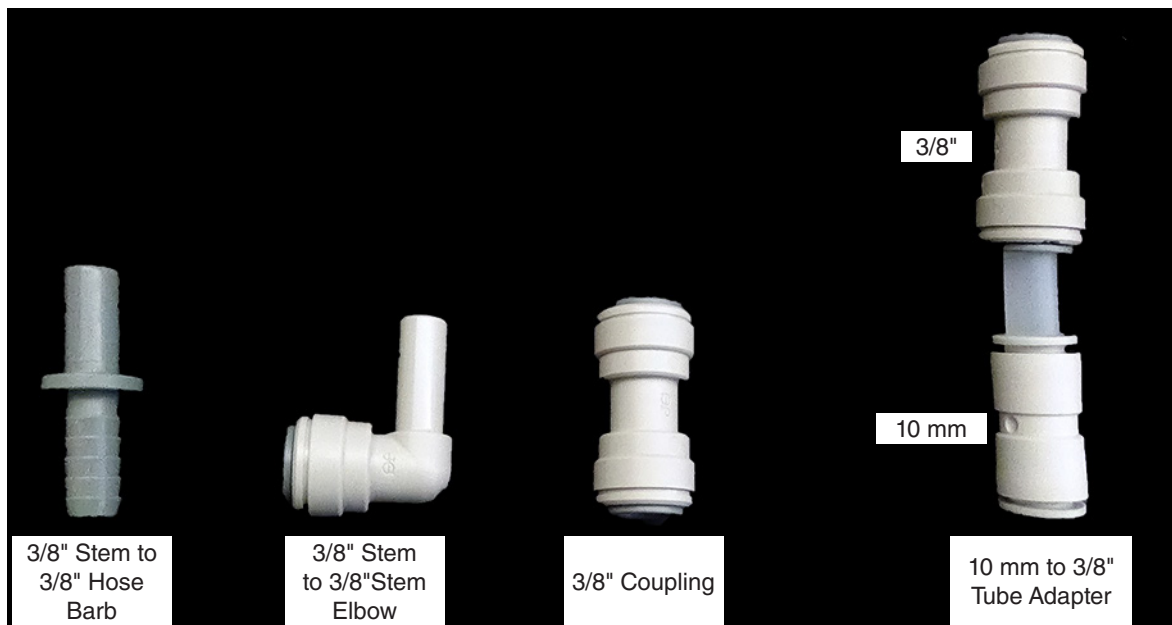


Figure 6.3d: Supplied water inlet fittings.

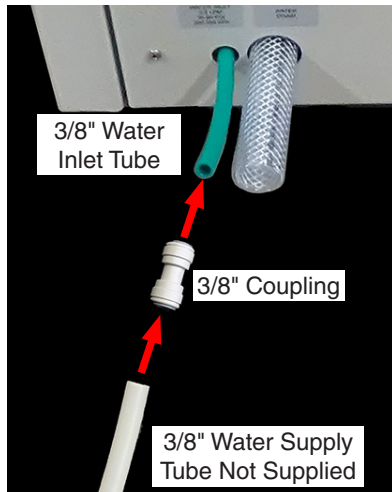


Figure 6.3e: Water supply connections - Configuration 1.

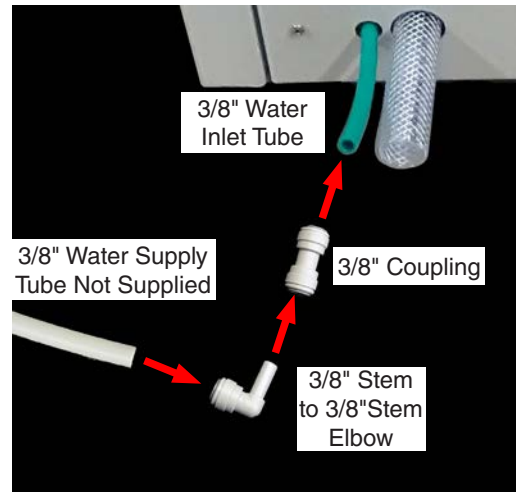


Figure 6.3f: Water supply connections - Configuration 2.

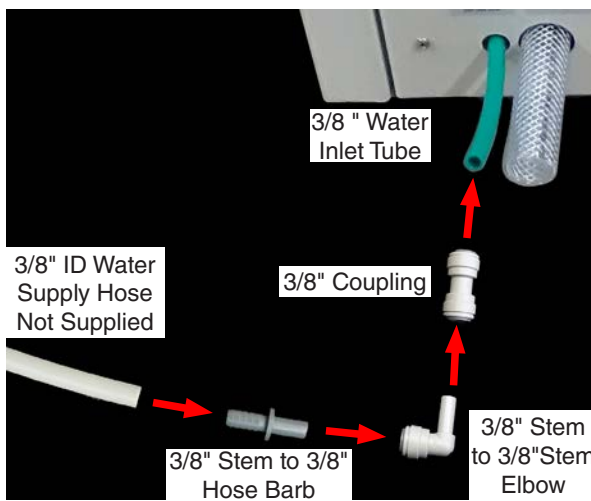


Figure 6.3g: Water supply connections - Configuration 3.

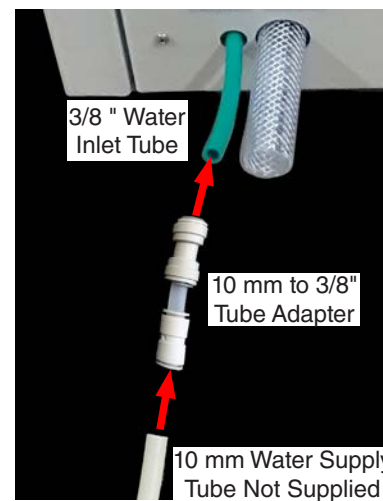


Figure 6.3h: Water supply connections - Configuration 4.

Inside Plumbing

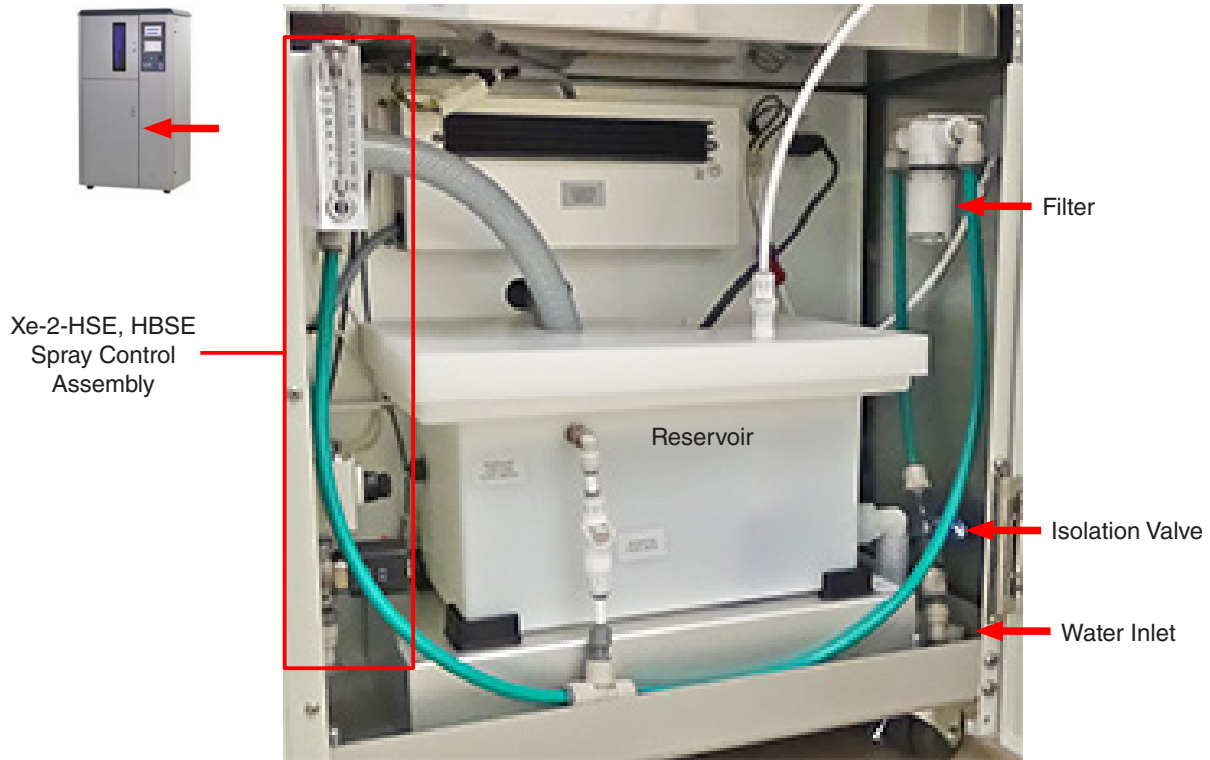


Figure 6.3i: Lower access door opened to show water supply plumbing.

Drain Connections

- A water drain connection must be made on all Xe-2 testers.
- The drain connections are made at the lower rear of the unit (Figure 6.3j).
- The Xe-2 is supplied with 3/4" (19 mm) connector fittings and 16.5 feet (5 m) of 3/4" (19 mm) drain hose in kit XR-11358-K (Figure 6.3k).
- Example water drain connections are shown in Figure 6.3l and Figure 6.3m.



Figure 6.3j: Water drain connection.



Figure 6.3k: Supplied water drain hose and fittings.

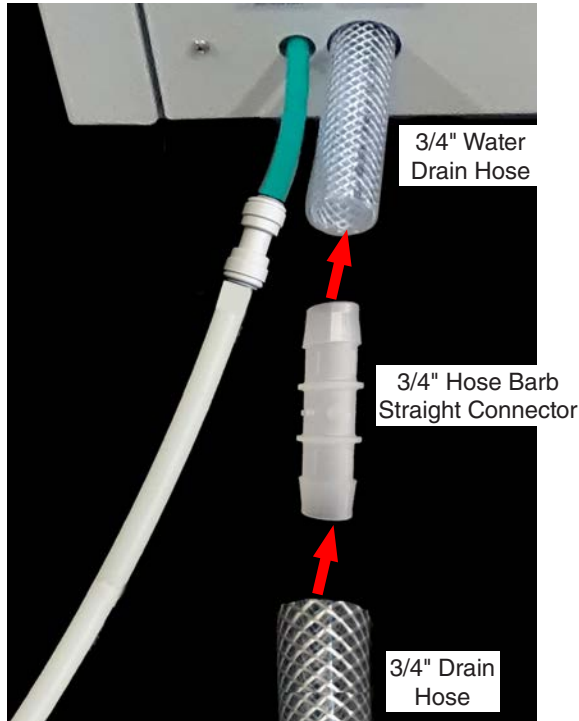


Figure 6.3l: Water drain connections - Configuration 1.

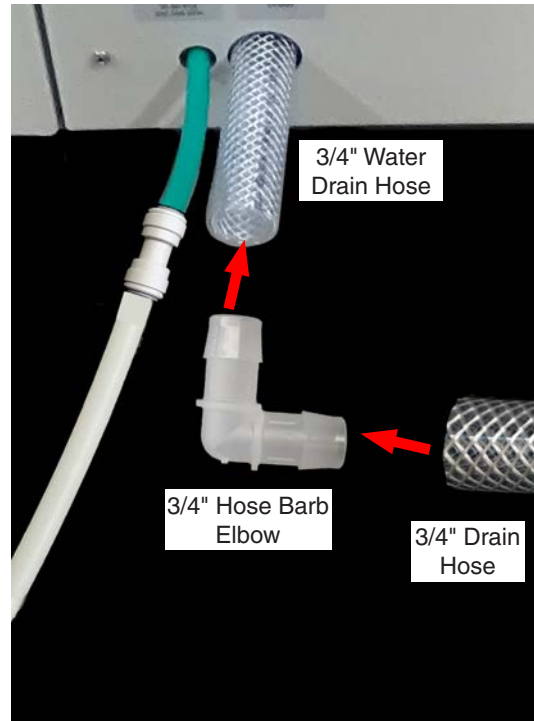


Figure 6.3m: Water drain connections - Configuration 2.

Raised Drain Connections

- If the tester drain hose must rise more than 100 mm (4.0") above the floor at any point before reaching a drain, a pump is needed or the tester must be elevated.
- An optional drain pump kit is available (part number X-6955-K 120 V and X-6956-K 230 V) to pump drain water over obstacles or to an elevated drain.
- Alternatively, an optional lift kit can be used to raise the entire tester up off of the floor (part number X-15416-K).
- Do not use concrete blocks, pallets, bricks, or other means to raise the tester to achieve proper drainage.
- Contact [Q-Lab Repair and Tester Support](#) with any questions about tester drainage requirements.

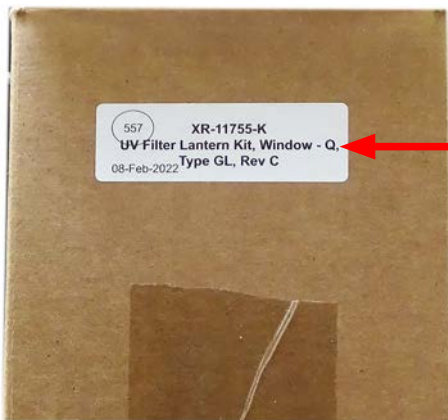
6.4 Lantern and Lamp (Jun 2022)



1. Make sure the Xe-2 is powered **OFF** before installing lamp and lantern.



2. Make sure the tester main power supply is **OFF** and disconnected.



3. Locate the box containing the UV filter lantern kit. Label on box shows filter type. See [Section 8.2](#)



4. Open the box and remove the information sheets and foam insert.

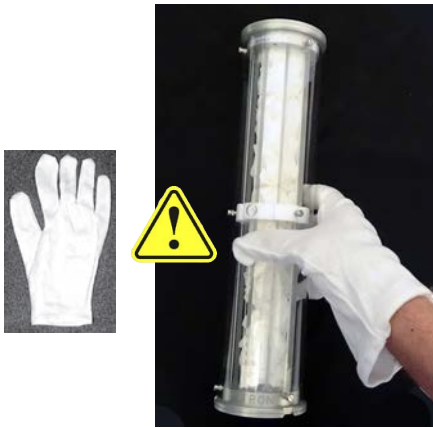


5. Carefully remove the lantern from the box.

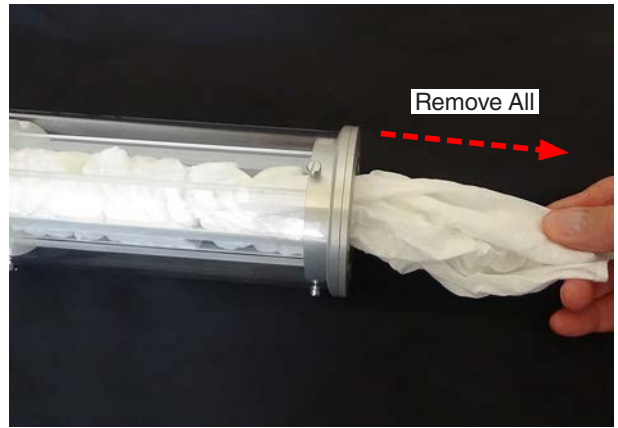


6. Remove the plastic film from the lantern.

Section 6. Set Up



7. Do not touch the filter elements with bare hands. Wear cotton glove.



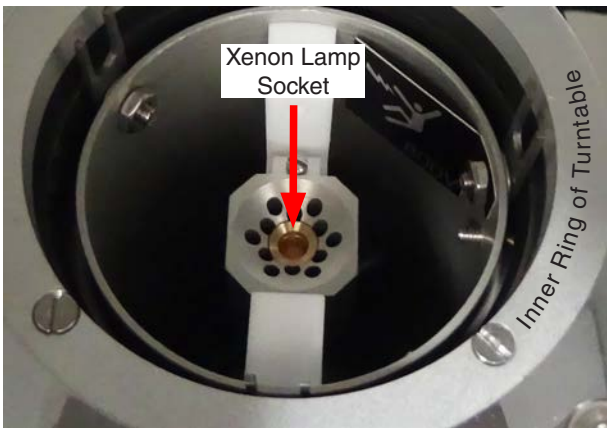
8. Remove all paper filler from inside the lantern.



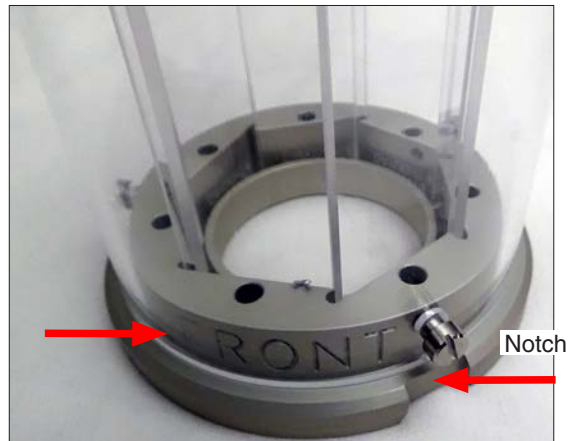
9. Open the Xe-2 test chamber door.



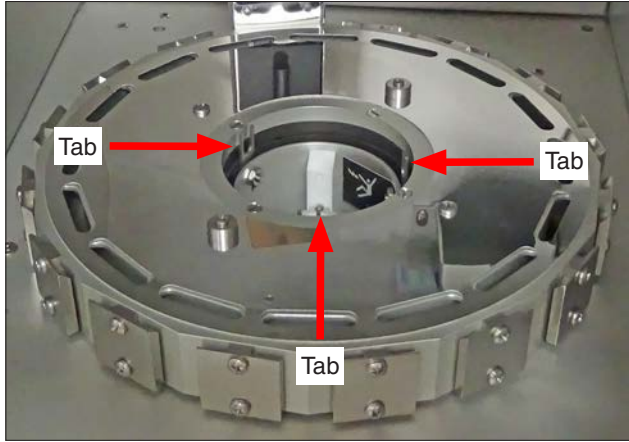
10. Remove any packaging material or tape from the turntable.



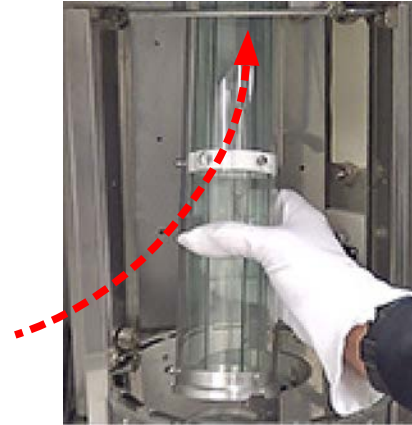
11. Locate the xenon lamp socket in the center of the opening in the middle of the turntable.



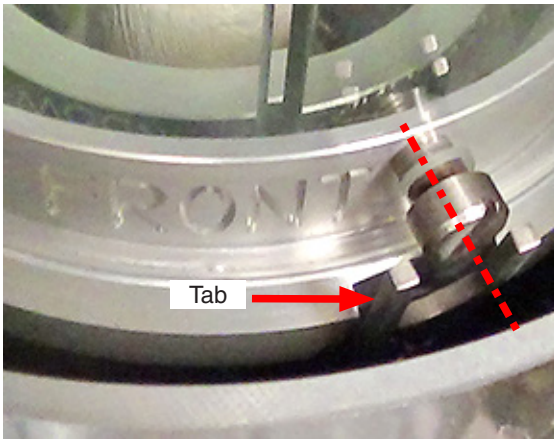
12. On the bottom ring of the lantern, locate the word "FRONT" and the notch in the ring.



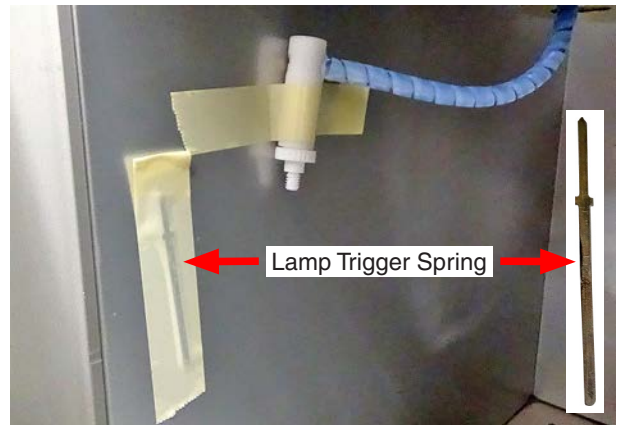
13. Locate the tabs in the center of the turntable.



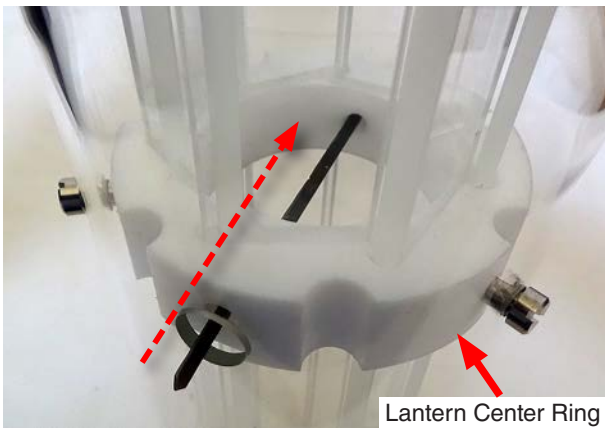
14. Place the lantern into the chamber on the turntable. The lantern bottom ring goes into the turntable opening.



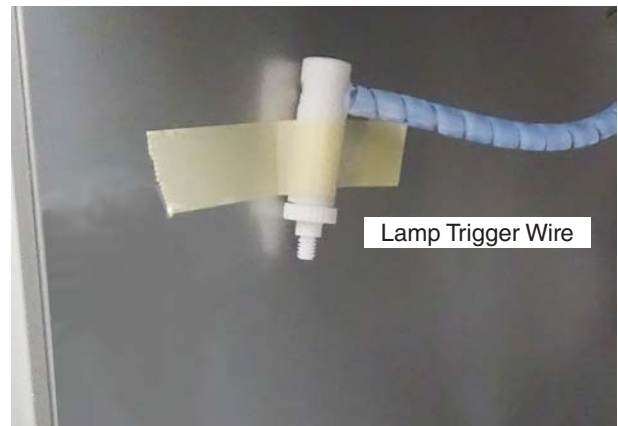
15. Align screws and notches in lantern bottom ring with tabs on the turntable.



16. Locate the lamp trigger spring taped to the side of the chamber. Remove the tape.

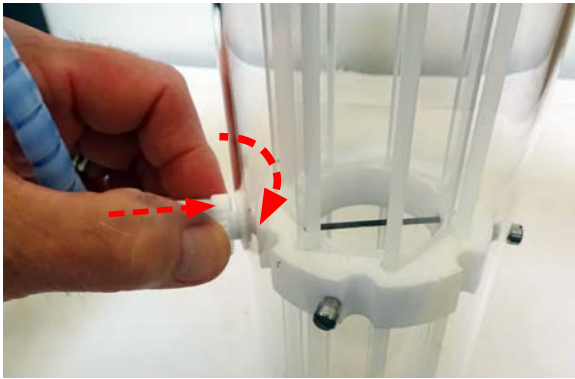


17. Install the lamp trigger spring all the way through the lantern center ring opening as shown.



18. Locate the lamp trigger wire with connector taped to the side of the chamber. Remove the tape.

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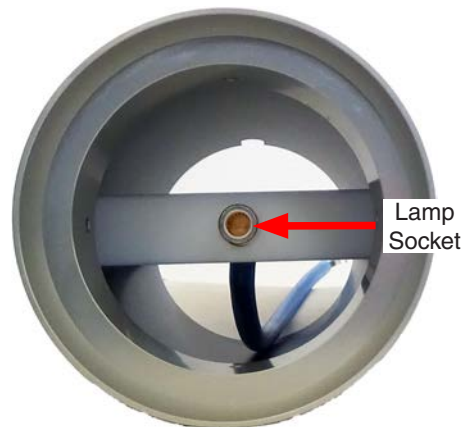
19. Connect the lamp trigger wire connector to the trigger spring. Thread the connector into the center ring. **Do not overtighten.**



20. Locate the box containing the Upper Lamp Cooling Tube.



21. Remove the lamp cooling tube assembly from box and the packaging



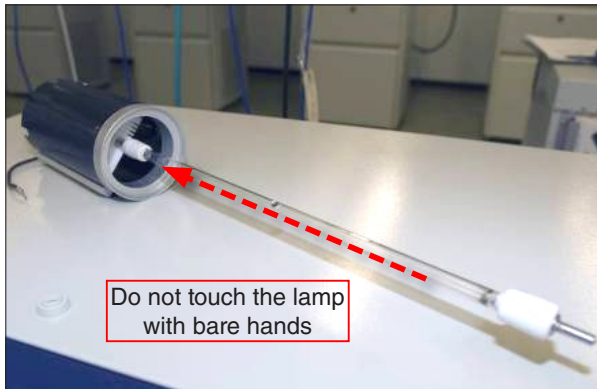
22. Note the socket at the inside center of the lamp cooling tube. The xenon lamp will be inserted into this socket.



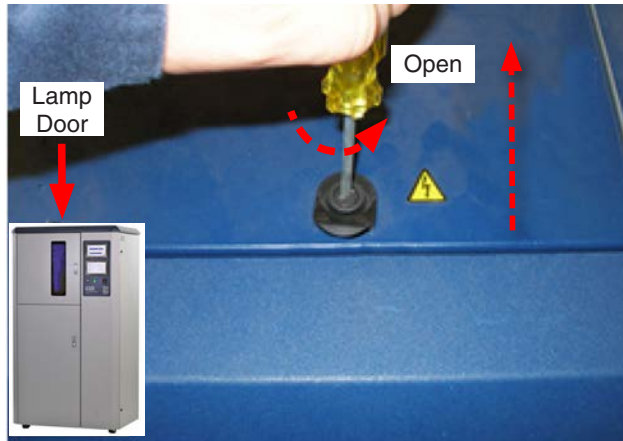
23. Locate the box containing the xenon lamp.



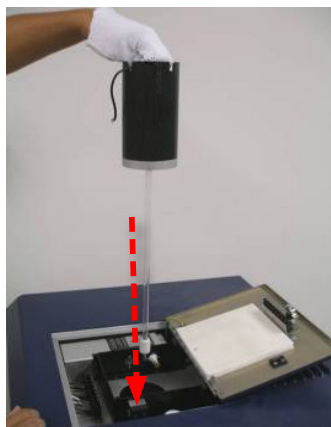
24. Carefully remove the lamp from the packaging. **Do not touch the lamp with bare hands.** Wear the cotton glove that comes in the kit.



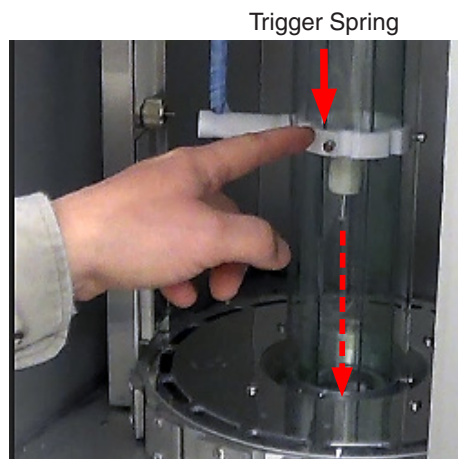
25. Insert the xenon lamp into the lamp cooling tube socket. Make sure the xenon lamp is fully seated.



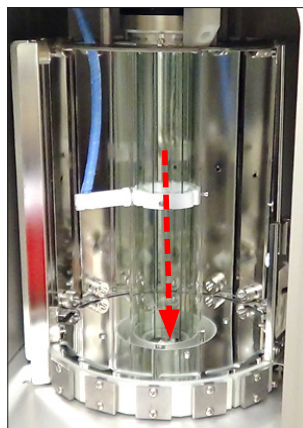
26. Open the latch and open the lamp door in the top of the Xe-2 cabinet.



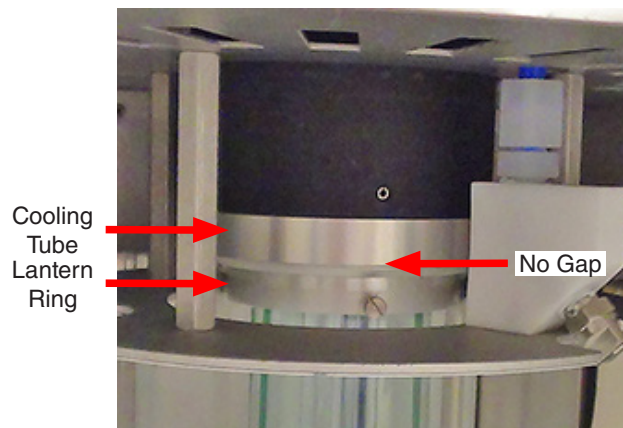
27. Carefully insert the xenon lamp straight down into the opening into the lantern in the test chamber.



28. Be sure to guide the tip of the xenon lamp past the trigger spring in the middle of the lantern.

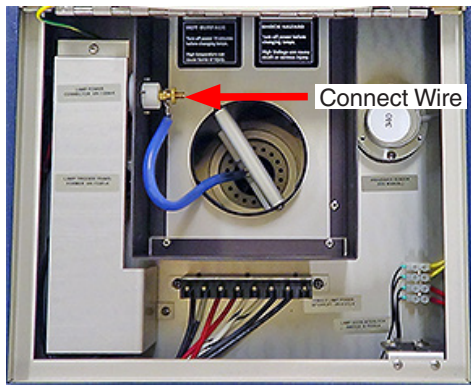


29. Gently push down on the lamp cooling tube to seat the xenon lamp in the connector at the bottom of the lantern. See [Step 11](#).

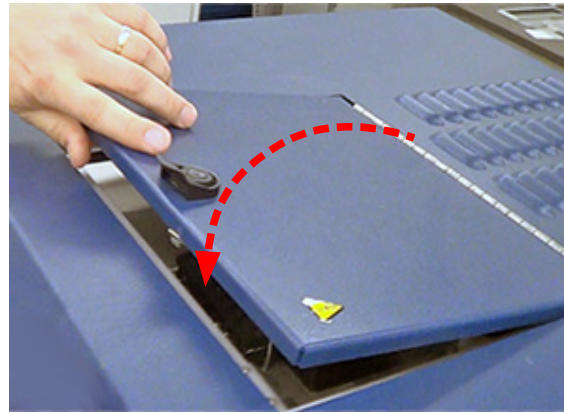


30. Make sure the base of the lamp cooling tube rests tightly against lantern top ring.

Section 6. Set Up



31. From the top of the tester, connect the lamp power wire. Hand-tighten the nut.
-



32. Close and latch the lamp door.
-



33. Close and latch the test chamber door.
-

7. Start Up

Overview



See [LX-5085-TM Q-SUN Xe-2 Technical Manual](#) for a complete guide to the programming and operation of the Q-SUN Xe-2 Xenon Test Chamber.

7.1 Specimen Mounting (May 2020)

- Specimens must be mounted on holders ([Figure 7.1](#)).
- The Q-SUN Xe-2 has 16 specimen holders mounted on a turntable.
- The turntable can be rotated by hand in either direction or by pressing the rotate button on the status screen.
- Slide the holders down into the specimen holder keepers on the turntable.
- All 16 specimen holders must be mounted during a test for optimal air flow through the test chamber.
- See [Specification Bulletin LX-5047](#) for specimen mounting guidelines and available holders.

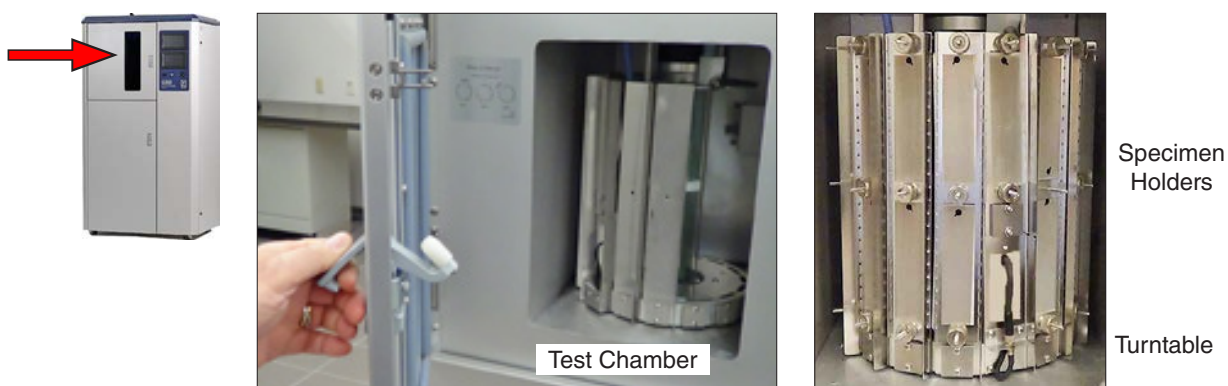


Figure 7.1: Xe-2 Specimen holders mounted on turntable inside the test chamber.

7.2 Power On

- Make sure the water is turned on (so the humidifier can fill) at least 20 minutes before powering tester **ON**.
- The power switch is located on the tester control panel ([Figure 7.3a](#)).

7.3 Main Controller Operation (Apr 2022)

Purpose

- The Q-SUN main controller controls all functions of the tester.
- Interactive software allows easy programming using dual, full-color touch-screen displays.
- One or more common test cycles have been pre-programmed. Custom test cycles can be easily created.
- The main controller continuously displays all test status conditions and monitors for errors. The main controller will automatically stop a test if an error is detected.
- New software revisions can easily be downloaded and installed.
- System configuration and performance data can be exported to assist in troubleshooting.

Display Screens

- Two touch-screen monitors mounted on the Q-SUN control panel are used to control tester operation and the display of test status.
- The Status Screen is on the top and the Menu Screen is on the bottom ([Figure 7.3b](#)).
- The Status Screen ([Figure 7.3c](#)) displays tester current running conditions.
- The Menu Screen ([Figure 7.3d](#)) is the main interface for operator control of the tester, including settings, programming, and calibration.
- The screens are activated when the tester is powered on.
- After an interval of inactivity, the screens will automatically deactivate. Just tap a screen to reactivate.
- The touch-screens should be cleaned with a soft cloth and alcohol. Do not use water to clean the screens.
- The screens can be operated using a stylus. Many operators prefer using a stylus with the touch-screens.
- A large LED indicator ([Figure 7.3b](#)), below the menu screen and visible from a distance, changes colors to indicate current operational status of the test.
- See *LX-5085-TM Q-SUN Xe-2 Technical Manual* for complete details of main controller operation.



Figure 7.3a: Power switch on control panel of all Xe-2 testers.



Figure 7.3b: Status screen and menu screen.

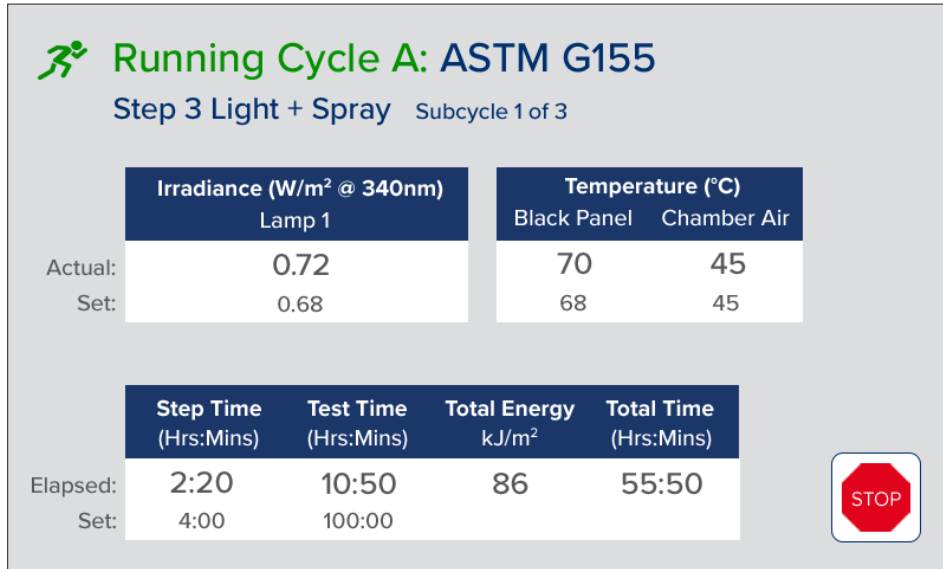


Figure 7.3c: Status screen.

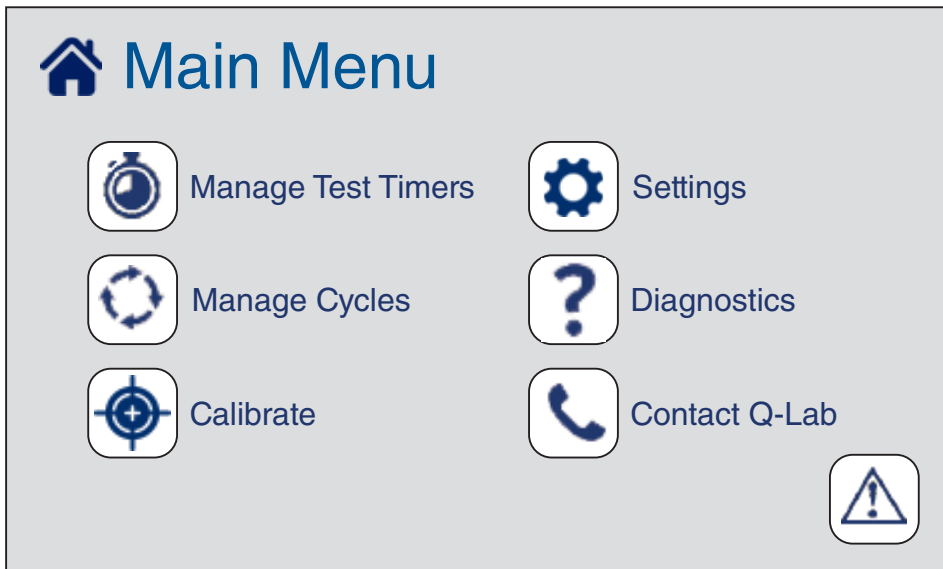


Figure 7.3d: Menu screen.

8. Warranty (Feb 2014)

One Year Limited Warranty

- All Q-SUN Xenon Test Chambers are guaranteed against defects in workmanship or materials for one year.
- Liability is limited to replacing or repairing any part or parts that are defective in materials or workmanship and that are returned to our factory, shipping costs prepaid.
- Liability in all events is limited to the purchase price paid. Damage due to accident or abuse is not covered. Labor cost is not covered.
- Q-Lab Corporation makes no other warranties, including implied warranties of merchantability or fitness for a particular purpose, except as may be expressly provided by the Q-Lab Corporation in writing.
- Q-Lab Corporation shall not be liable for any incidental, consequential, special or contingent damages arising out of the sale or use of any product.
- Q-SUN Xenon Test Chambers are made in the USA.

9. Repair and Tester Support (Feb 2014)

- Q-Lab Repair and Tester Support is available Monday through Friday from 8:30 AM to 5 PM (international office time).
- Please contact Q-Lab support (see contact information below).
- You can also visit our website at www.q-lab.com to register your tester to access additional useful troubleshooting guides, operating manuals, and technical information.



For sales, technical, or repair support, please visit:

Q-Lab.com/support

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