



# Q-RACK<sup>®</sup>

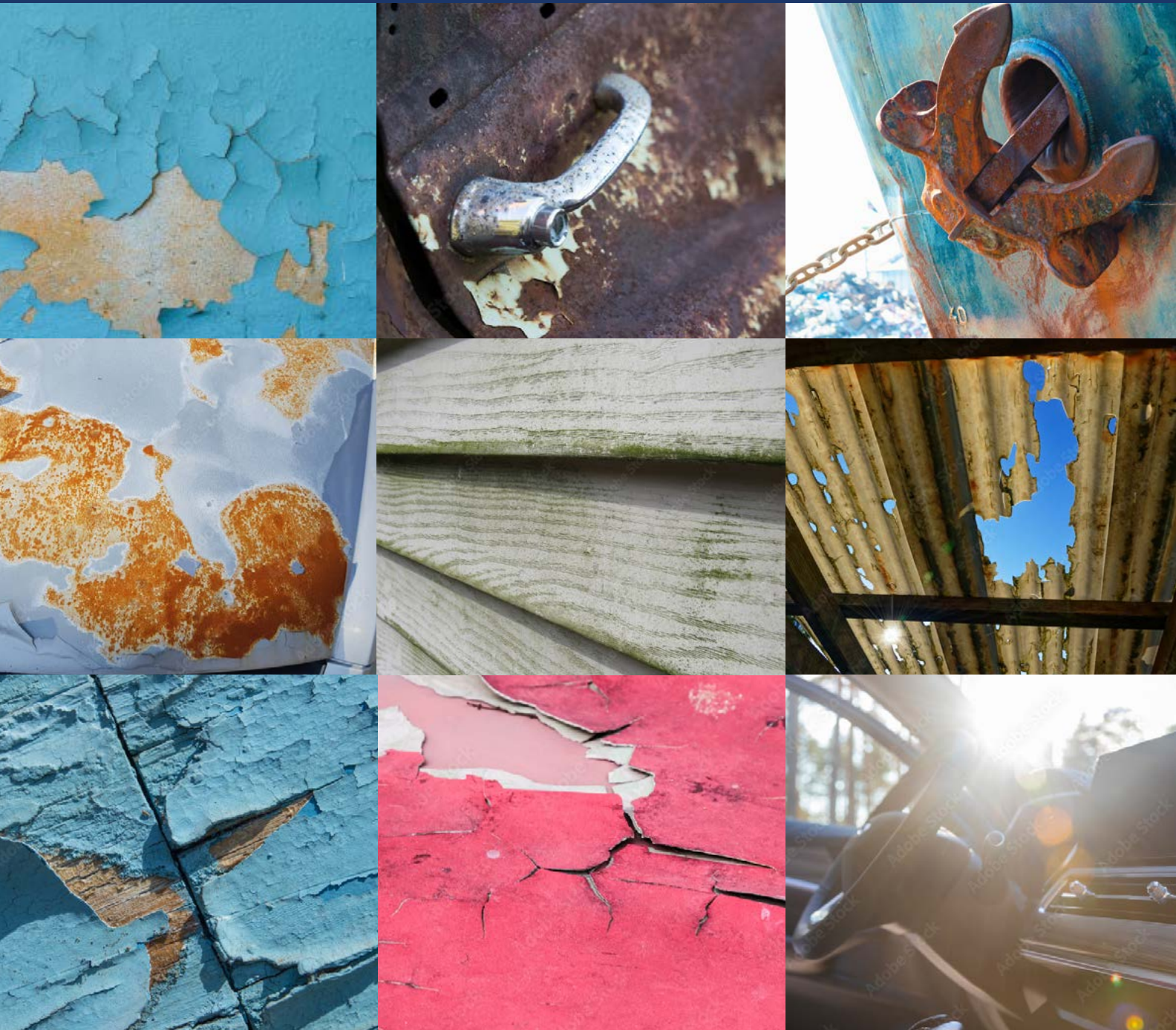
Outdoor Exposure Rack Systems



# Why test outdoors?

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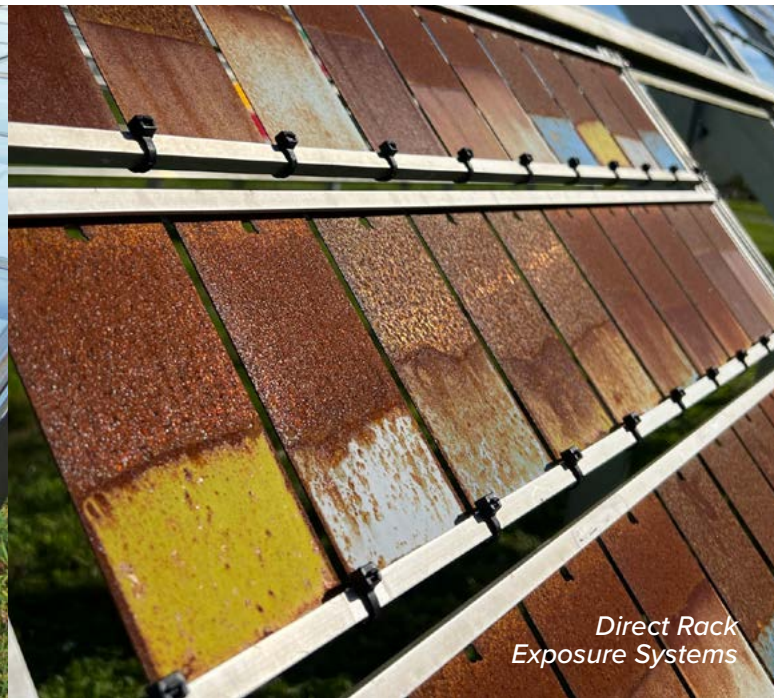
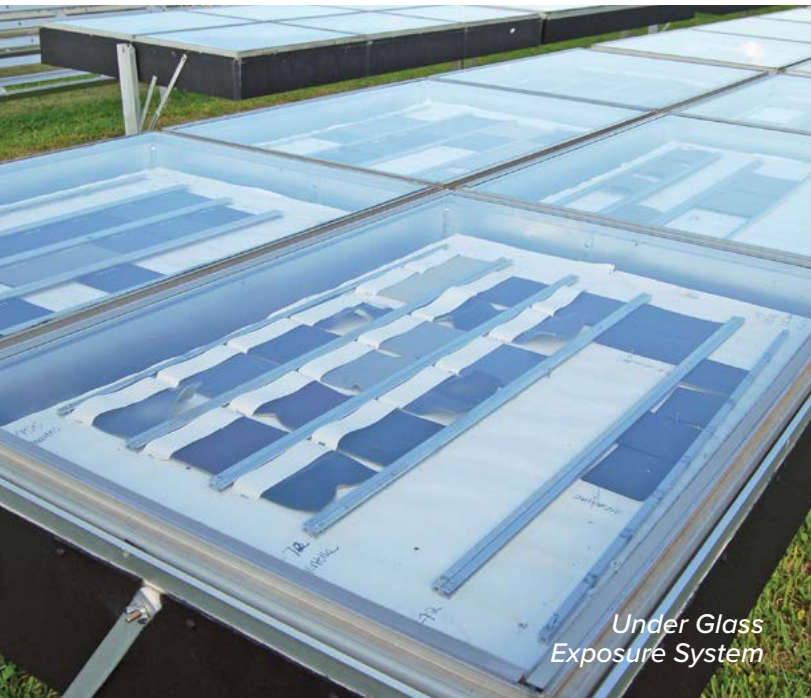
Outdoor testing is the only way to have full confidence that your product will be able to withstand the punishing forces of weathering – sunlight, heat, & moisture. While Florida and Arizona are international benchmark locations for natural weathering, they are generally considered “worst case” conditions. We recommend testing in several locations because weathering forces vary greatly throughout the world. Q-RACK Outdoor Exposure Rack Systems provide customers with an easily-installed package to set up and conduct their own outdoor exposures anywhere they wish.



## WHY Q-RACK?

With Q-RACK Exposure Rack Systems, users can conduct their own outdoor field tests at the location of their choice, providing essential comparative data. The aluminum frames are durable, and last for decades in the harshest environments. These are the same exposure racks used at accredited test sites at Q-Lab Florida and Arizona.

Exposure racks can be configured to satisfy international standards, including ISO 877-2, ASTM G7, ASTM G24, ASTM D4141, and more. Standard options include two types of exposures, Direct or Under Glass.



Direct Exposures are intended for materials and products that are expected to experience the full effects of weathering - sunlight, heat, & moisture. Common materials include coatings, plastics, and any finished product intended for outdoor use.

Under Glass Exposures are popular for automotive interior components as well as home and office products. A product behind window glass will not receive as much shortwave UV energy nor the same level of moisture a product will see outdoors. But because there is less cooling and air flow, a product under glass may be subject to higher temperatures than direct exposures.

# Q-RACK Exposure Rack Systems

## Direct Exposure Rack System

Each Direct Exposure Rack System contains an unassembled 12' × 5'6" (3.66 m × 1.68 m) corrosion-resistant frame, and the necessary hardware, Panel Flaps, and Base, to expose numerous test specimens.



### PANEL FLAPS

Each Direct Exposure Rack System includes five panel flap assemblies, enough to hold over one-hundred 6" × 12" test panels. To accommodate smaller sizes and expanded specimen capacity, additional panel flap assemblies are available.

### Q-PANEL TEST SUBSTRATE

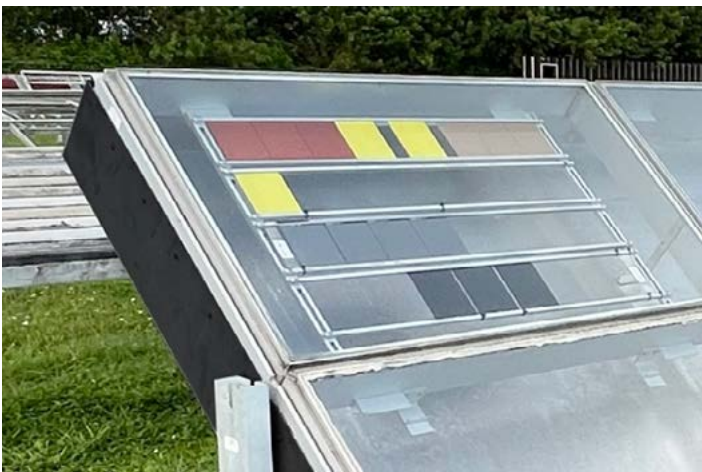
Direct Exposure Rack Systems are designed to hold hundreds of Q-PANEL test substrates. See the [Q-PANEL Brochure](#) for sizes & options.

### POSITIONING ARMS

Exposure Rack Systems can be positioned at 0° (horizontal), 5°, 45°, or 90° (vertical) angles. Custom positioning arms, at non-standard exposure angles, are available.

## Under Glass Exposure Rack System

Under Glass Exposure Rack Systems include the same sturdy, corrosion-resistant frame as Direct Exposure systems, as well as six 3 mm glass window assemblies (international shipments do not include glass, only glass frames). Six Sub-Frame mounting assemblies are included with each Under Glass Exposure Rack System.



### UNDER-GLASS SUB FRAME ASSEMBLIES

Sub-Frame assemblies are standard for under glass exposures. Six frames, approximately 32" × 35" (81 × 89 cm), install easily behind the glass frame, and allow for a variety of test samples to be exposed.

# Accredited Test Exposures

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If performing your own outdoor exposure is not viable, we offer the option to expose your materials or products at any one of our three global benchmark sites, in Florida, Arizona, or Ohio. Our laboratories are ISO 17025 accredited to perform many of the outdoor exposures specified by international standards. Please refer to [Q-Lab's Test Services Brochure](#) for further details.

## **SOUTH FLORIDA IS PERFECT FOR TESTING:**

- > Sunlight (UV) stability
- > Moisture sensitivity
- > Mildew/mold resistance
- > Surface erosion
- > High-temperature resistance
- > Thermal shock response
- > Corrosion behavior
- > Moisture ingress
- > Acid rain resistance

## **ARIZONA DESERT IS PERFECT FOR TESTING:**

- > Sunlight (UV) stability
- > Heat aging effects
- > Thermal expansion stress resistance
- > Heat deflection and distortion
- > Material durability in low humidity environments



### **THE GLOBAL BENCHMARK**

Q-Lab Florida has more specimens on test than any other outdoor weathering facility in the world.

# Accessories & Options

Q-RACK Outdoor Exposure Systems can be equipped with a variety of optional features to meet your unique weathering testing needs.



## POSITIONING ARMS

**FL-3071-K** 0°, 5° Positioning Arms

**FL-3032-K** 45° Positioning Arms (shown in image)

**FL-3126-K** 90° Positioning Arms

Positioning Arms are sold in pairs and orient Q-RACK frames at standard angles of exposure. Custom angles are available - contact Q-Lab for more details.



## BLACK BOX

**FL-3091-K** Black Box Kit

A Black Box exposure will elevate specimen temperatures and satisfy standards ASTM D4141 and SAE J1976. The Black Box upgrade kit can be installed on either Direct or Under Glass exposures.



## OFFSET HOLDERS

**FL-3110-K** Offset Panel Holder Kit, 6" (15.25 cm)

**FL-3111-K** Offset Panel Holder Kit, 8" (20.30 cm)

Offset Holders prevent moisture and water from dripping on specimens below. The kit includes five channels for holding specimens and is popular for testing wood coatings.

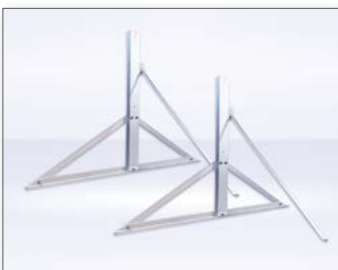


## SUB FRAME HOLDERS

**FL-3106-K** Sub Frame Kit for Open Rack

**FL-3113-K** Sub Frame Kit for Under Glass Rack

Sub frame holders allow for easy installation and adjustment of non-standard test specimens. Sub frame kits include enough assemblies to fill an entire rack.



## T-LEG MOUNTING HARDWARE

**FL-3190-K** Q-RACK T-Leg Kit for Concrete Surface Installation

The Horizontal T-Leg allows for mounting a Q-RACK on a level, concrete surface. The kit includes two legs and hardware.

# Summary

● Standard    ◐ Optional

Feature	Direct Exposure Rack Kit (FL-3055-K)	Under Glass Exposure Rack Kit (FL-3119-K or FL-3149-K) <sup>2</sup>
Corrosion-Resistant Anodized Aluminum Frame	●	●
Satisfies ISO 877-2 <i>Plastics Exposure Direct Weathering &amp; Behind Window Glass</i>	●	●
Satisfies ASTM G7 <i>Natural Weathering of Materials</i>	●	–
Satisfies ASTM G24 <i>Exposures to Daylight Filtered Through Glass</i>	–	●
Exposure Angles at 0°, 5°, 45°, or 90°	●	●
Custom Exposure Angles available <sup>1</sup>	●	●
Black Box Kit (ASTM D4141, SAE 1976)	◐	◐
Mounting Kit to install on concrete surface	●	●
Availability Worldwide <sup>2</sup>	●	◐

1. Contact Q-Lab to inquire about custom exposure angles

2. For Under Glass Exposure Rack Systems outside of North America, FL-3149-K should be ordered. This Q-RACK kit ships without glass - customer will need to source their own glass locally.



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## OUR GLOBAL NETWORK

We are committed to provide world-class technical, sales, and repair support in each of the 120 countries in which we operate. Visit [Q-Lab.com/support](https://www.q-lab.com/support) for contact information specific to your location and inquiry type.

### GLOBAL HEADQUARTERS

WESTLAKE, OH USA  
info@q-lab.com  
+1-440-835-8700

### Q-LAB EUROPE

BOLTON, ENGLAND  
info.eu@q-lab.com  
+44-1204-861616

### Q-LAB DEUTSCHLAND

SAARBRÜCKEN, GERMANY  
info.de@q-lab.com  
+49-681-857470

### Q-LAB CHINA

SHANGHAI, CHINA  
info.cn@q-lab.com  
+86-21-5879-7970

### Q-LAB FLORIDA

HOMESTEAD, FL USA  
testing@q-lab.com  
+1-305-245-5600

### Q-LAB ARIZONA

BUCKEYE, AZ USA  
testing@q-lab.com  
+1-623-386-5140