



ENVIRONMENTAL CORROSION TESTING

ISO 22479 Sulfur Dioxide Test Chamber

517 L humid SO₂ corrosion testing equipment for metals, coatings, contacts and plated components.

ISO 22479:2019

517 L

1% SO₂ CONFIGURATION

TEST PURPOSE

Accelerated
evaluation in
humid SO₂

CHAMBER

517 L corrosion-re-
sistant PP interior

CONTROL

Temperature,
time and
measured gas
dosing

BUYER FIT

Laboratories,
manufacturers
and certification
teams



Purpose, Test Value & Operating Logic

The chamber establishes a warm, humid atmosphere containing a controlled quantity of sulfur dioxide. It supports comparative corrosion assessment where ordinary climatic testing cannot reproduce the combined effects of moisture and industrial SO₂ pollution.

01

Controlled exposure

Measured SO₂ introduction, temperature conditioning and adjustable test time.

02

Corrosion-resistant build

PP chamber construction and titanium-alloy wetted components support harsh test conditions.

03

Procurement value

A practical platform for material screening, coating comparison and quality verification.

517 L humid SO₂ exposure system

CATALOGUE VIEW · CONFIGURATION SUBJECT TO PROJECT

Typical test sequence

1

Prepare

Clean and position specimens

2

Condition

Establish temperature and moisture

3

Dose

Introduce measured SO₂

4

Expose

Run the specified duration

5

Vent / renew

Follow the selected cycle

6

Evaluate

Record corrosion or functional change

Core Configuration & Performance

Values from the supplied product data

EXPOSURE & TEMPERATURE	
Internal chamber volume	517 L
Temperature range	RT +10°C to 50°C
Control accuracy	±1°C
Temperature uniformity	±2.0°C
Test time	0-999 h, adjustable
Nominal SO ₂ concentration	1% by volume
Initial SO ₂ gas volume	5.17 L at the stated 1% configuration
Gas replenishment	Every 24 h under the stated configuration

CHAMBER CONSTRUCTION	
Chamber interior	Corrosion-resistant PP
Observation door	12 mm tempered glass
Heating element	Titanium-alloy electric heating tube
Temperature sensor	Titanium-alloy PT100
Temperature control	PID
Gas measurement	Corrosion-resistant digital mass flow meter
Water system	Built-in PP water tank
Thermal insulation	Rigid foam

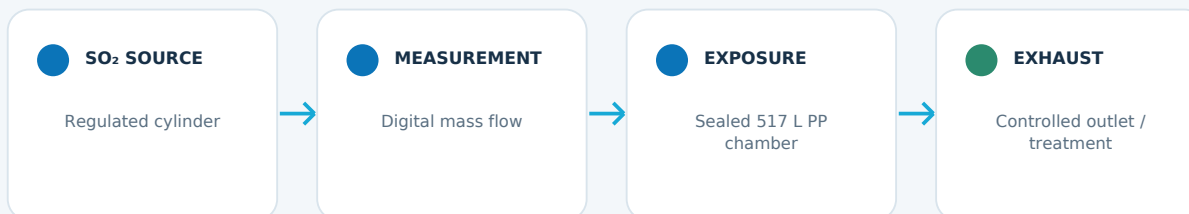
CONTROL, UTILITIES & INSTALLATION	
Controller input / output	PT100 ×1 dry-bulb input / 4-20 mA
Power supply	AC 220 V, 50 Hz
Rated power	2.5 kW
Recommended installation space	At least 2200 × 2000 × 2200 mm (W × H × D)
Exposure control	Controlled gas introduction with automatic gas shut-off
Optional project functions	PLC/HMI, data functions and safety accessories to be confirmed

Configuration note: Final gas concentration, dosing volume, replenishment cycle, controller functions, exhaust treatment and documentation package should be confirmed against the applicable standard edition and project specification.

SO₂ Dosing, Humid Exposure & Exhaust Path

Functional arrangement for project review

Functional gas path



Temperature conditioning and water-based humidity act inside the exposure chamber. The exhaust arrangement must be matched to the laboratory's neutralization and ventilation plan.

Control and construction highlights

Measured gas dosing

Corrosion-resistant digital mass flow meter supports repeatable gas introduction.

Temperature stability

PT100 sensing and PID control maintain the specified chamber condition.

Corrosion resistance

PP interior and selected titanium-alloy components reduce test-environment attack.

Timed exposure

Adjustable 0-999 h control supports defined laboratory test schedules.

Water management

Built-in PP water tank supports the humid exposure environment.

Safety integration

Gas shut-off, exhaust and project-specific alarms should be reviewed together.



SERVICE-SIDE CONFIGURATION VIEW

Method Compatibility and Laboratory Assurance

Confirm the edition named in the test plan

PRIMARY REFERENCE

ISO 22479:2019

Humid sulfur dioxide fixed-gas method for assessing corrosion resistance of metals and alloys, metallic and non-organic coatings, and organic coatings.

RELATED METHOD

IEC 60068-2-42:2003

Test Kc addresses the corrosive effect of sulfur dioxide atmospheres on contacts and connections. Gas concentration and severity require a separate configuration review.

PROJECT PROCEDURE

DIN 50018 / Customer Method

Legacy DIN procedures and internal corporate specifications may be supported after review of the cycle, gas dose, condensation method and acceptance criteria.

Laboratory safety and verification

1

Gas control

Use a suitable regulator, verified dosing path and leak-aware operating practice.

2

Ventilation

Connect the outlet to an approved exhaust or SO₂ treatment arrangement.

3

Protection

Specify shortage alarms, interlocks, emergency ventilation and leak detection as required.

4

Records

Confirm temperature, time and gas-flow verification documents for the quality system.

Compliance assurance

The chamber is designed to support humid SO₂ corrosion testing associated with ISO 22479 and customer-defined procedures. Final compliance depends on the complete laboratory arrangement, including the selected standard edition, gas quantity or concentration, humidity method, exposure cycle, specimen placement, replenishment, exhaust treatment and measurement verification. IEC 60068-2-42 suitability must be confirmed separately.

Designed for Real Laboratory Workflows

For manufacturers, laboratories and certification teams



517 L SULFUR DIOXIDE CORROSION CHAMBER

SURFACE FINISHING

Metals & coatings

Compare plated, painted, converted or protected surfaces after defined humid SO₂ exposure.

ELECTRICAL

Contacts & connectors

Assess visible corrosion and, where required, contact resistance or functional change.

AUTOMOTIVE

Plated components

Support qualification and process control for hardware exposed to industrial atmospheres.

LAB / R&D

Material comparison

Screen candidate materials, investigate failures and document comparative corrosion performance.

Configuration details to confirm before quotation

Standard

Edition and method

Specimens

Material, size, quantity

Exposure

SO₂ dose, temperature, time

Cycle

Humidity, renewal, ventilation

Installation

Power, gas, exhaust, space

Documents

Manual, inspection, verification



Technical Inquiry & Expert Support

Share the details below for a configuration and quotation review.

To confirm whether the Sulfur Dioxide Test Chamber matches your test requirement, please provide the core project information below. KingPo can then review the applicable standard, exposure method, utilities, safety provisions and documentation scope.

INFORMATION NEEDED	DETAILS FOR PROJECT REVIEW
Applicable standard	ISO 22479, IEC 60068-2-42, DIN 50018 or customer procedure
Specimen information	Material, coating, dimensions, quantity, weight and placement
SO ₂ exposure	Concentration or volume, temperature, duration and replenishment cycle
Moisture method	Water level, humidity or condensation requirements
Laboratory utilities	Power, gas cylinder, regulator, exhaust and neutralization plan
Documentation	Datasheet, manual, inspection and verification records required

Product Link



Scan to view the online product page

ISO 22479 Sulfur Dioxide Test Chamber
517 L humid SO₂ corrosion testing equipment

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