

DISCOVER CORROSION



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BEFORE IT'S TOO LATE



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WE ARE YOUR CONTACTS

The development and production of high-quality corrosion test systems is our speciality. With many years of experience in this branch and a high degree of expertise, we are always the right contact for you.

Our equipment is quite versatile, for use in the automotive industry and electromobility as well as in the agricultural and in the offshore branch. Furthermore, the areas of sanitary engineering, galvanising and solar technology are included in our loyal customer base.

Constant and continuous development of our products is a permanent goal, as we orient ourselves to our values.

TRUE TO THE MOTTO: A ROLLING STONE GATHERS NO MOSS!

Our company is located in Salzkotten, Germany. Many years ago an important centre for salt extraction, it has become now a place of establishment for many technically oriented companies.

We are looking forward to cooperate with you during the selection or development of your corrosion test system.



RSI

OUR MANAGEMENT

From left: Heiner Rüter, Gerhard Schramm, Johann Iwich



DIN EN ISO 9227

OUR CONSULTING

Could you not find the standard you were looking for? Do you have questions or would you like an individual consultation? Contact us directly for technical questions, either by phone or email.



STANDARDS SAFETY

RSI offers its customers reliability in the selection of equipment. We don't make the solution of your tasks into a balancing act. The wealth of our experience offers you the reliable basis for implementation of your test requirements.

RSI knows the relevant standards, directives and regulations in the corrosion test area. We explain, consult and inform about the newest developments and offer you the right equipment for the standard-conforming solution.

SERVICE WITH US PERSONALLY

The personal service and a reliable partnership are not just empty words with us. Based on this we offer you fast and flexible cooperation all around Germany and Europe.

All repairs, service and calibration services are guaranteed by our qualified personnel. Up on request we will also perform service and repairs on third-party equipment.

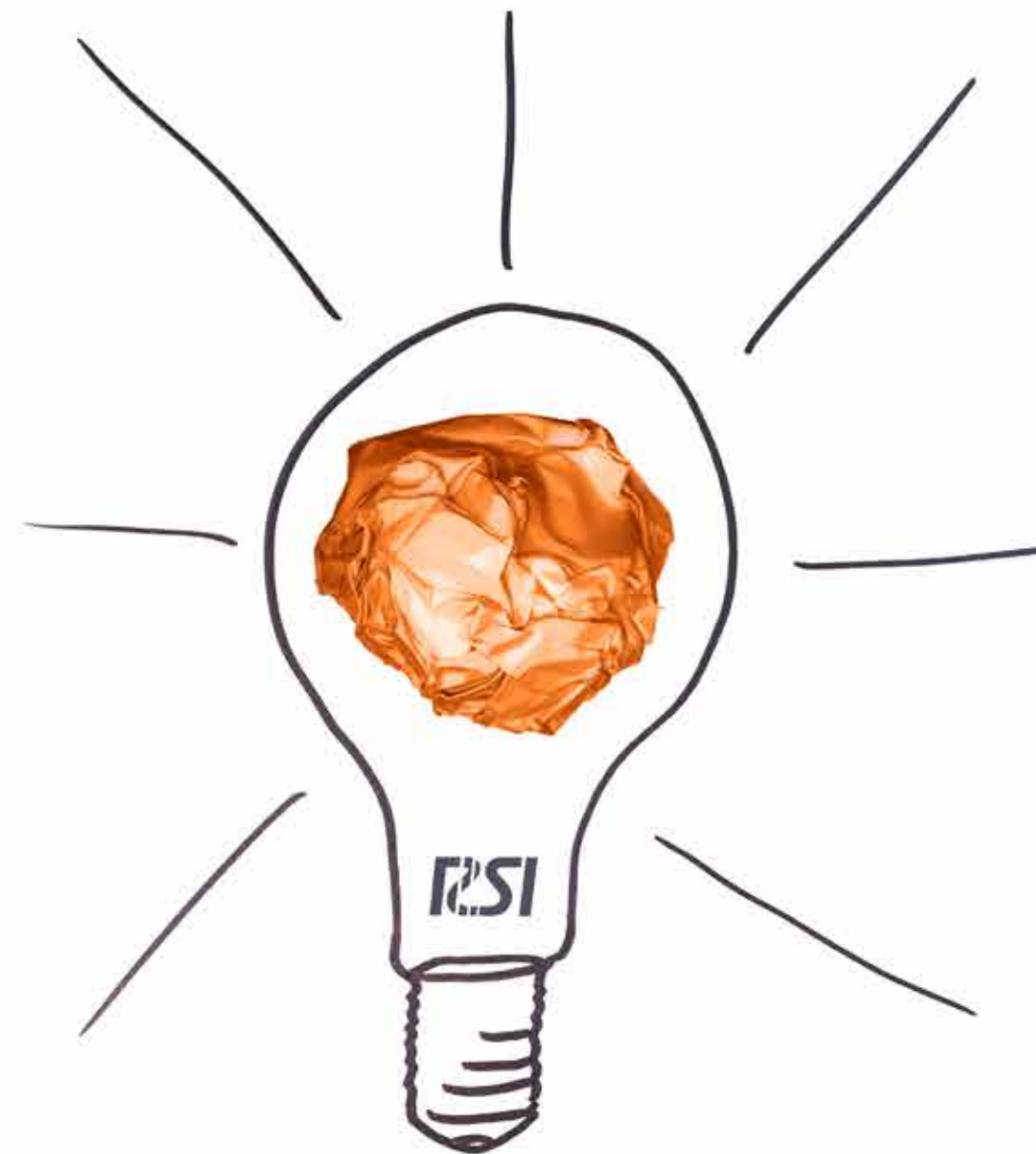
An extract from our services:

- Performing service
- Performing repairs
- Performing calibrations (also for gas dosing systems)
- Performing leak checks on cooling systems
- Check according to DGUV V3



OUR SERVICE

We dedicate ourselves to the products that we build for you.
Our complete customer service is available to you even after commissioning.



SOLUTIONS DEVELOPING TOGETHER

Our expertise is the basis for further development of our equipment series and aids us in cooperation with you to always find the best solution.

RSI only uses components from well-known manufacturers. We place the highest value on application-oriented solutions, operational reliability and customer-friendly operating. All our suppliers are certified to DIN EN ISO 9001.

OUR ICONS

BRIEFLY EXPLAINED

Modern corrosion tests frequently consist of a combination of various corrosive atmospheres. Our equipment can portray these various climatic test phases, which are described and illustrated in the following.



SALT FOG

Salt fog tests allow predictions on the corrosion behaviour of the test specimen in an environment with saline contamination. Especially the stress caused by ocean climate and through road salt on vehicles is the focus here. The salt fog condenses on the surface of the test specimen and acts as an electrolyte.



CONDENSATION WATER CLIMATE

An atmosphere with 100% humidity generates a sustained heavy condensation on the surface of the test specimen. Due to the very small size of the dewdrops, these also diffuse in the smallest cracks and defects on the surface of the test specimen.



CONDENSATION WATER CLIMATE WITH GAS ADDITION

In order to perform condensation tests under more stringent conditions, additional corrosive gases can be introduced into the test chamber. Often sulphur dioxide is used as a corrosive gas, which leads to an acidic condensation.



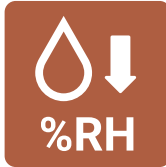
VENTILATION WITH AMBIENT AIR

Blowing in fresh air is used to dry the test specimen, as resting phase or for faster removal of the corrosive test chamber atmosphere after completion of the test.



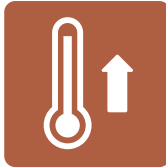
RECIRCULATING AIR VENTILATION

The recirculating air ventilation ensures uniform conditions by high air circulation during the test phases standard climate, warm drying or humidity climate within the test chamber.



STANDARD CLIMATIC PHASE

A standard climatic phase of 23°C/50% is required to insert resting phases in the cyclical test run. The reproducibility in comparison with uncontrolled ambient air phases is significantly improved by the use of the standard climate.



WARM DRYING PHASE

In the warm drying phase the test goods can be quickly dried by a higher temperature. Along with the (mechanical) stress due to the temperature change, also the existing concentration of the electrolytes on the warm surface can be a desired stress.



HUMIDITY CLIMATE

During this phase the relative humidity is chosen very high, without condensation occurring on the test specimen. This prevents washing off of the corrosive medium and enables the electrical operation of the test specimen during the corrosion stress.



CLIMATE

Any desired temperature and humidity cycles can be run during the climate phase. The goal is to recreate variable climatic conditions in order to improve the correlation between the practical use and the corrosion test.



FROST CLIMATIC PHASE

Through the temperature change to negative temperatures for organic coating a mechanical stress is additionally generated for the actual corrosion test.



RAINING PHASES

The brief sprinkling is used for wetting the test specimen with a corrosive liquid. The critical corrosion stress is then done in the following climatic phases.



TEST CHAMBER FLUSHING

Used for fast cooling and intermediate cleaning of the test chamber via an automatic flushing of the test chamber walls.

Cab 300

Volumes: 300 l and 430 l and 850 l



Cab SERIES

CONDENSATION WATER AND KESTERNICH TEST CABINET

The resistance of coating substances against humidity are determined through the stress of the trials with condensation water. With this simple but very effective quality test a permanent condensation on the test specimen is generated. The optional use of sulphur dioxide enables a test run for higher stresses (Kesternich test).

Included in the features of the RSI condensation water and Kesternich test cabinets:

- Standard-conforming structure acc. to **ISO 6270-2**
ISO 6988
DIN 50018
- High-quality stainless steel materials for the chamber
- Test chamber door and glass panes made of ESG safety glass
- Lower frame
- Manual or fully automatic gas dosing

CabS SERIES

COMBINATION TEST CABINET

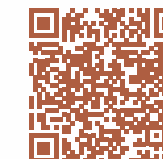
The combination test cabinets offer a simple and inexpensive entry into corrosion testing. Through their basic structure they are suitable as a condensation water device or also as salt fog test cabinet. Optionally also as combination for both test sequences.

Included in the features of the RSI combination test cabinets:

- Standard-conforming structure acc. to **ISO 6270-2**
ISO 9227
ISO 6988
DIN 50018
- Metering of the salt spray solution via regulated diaphragm pump
- High-quality stainless steel custom materials for the chamber
- Ergonomic touch panel
- Test chamber door and glass panes made of ESG safety glass
- Solution tank

CabS 430

Volumes: 430 l and 850 l



FLC AND TLC SERIES

CORROSION TEST CABINETS AND TOP-LOADING FURNACE

During the salt fog test the test specimen are exposed to a saline fog atmosphere with increased temperature, in order to simulate the stress through oxidizing corrosive substances in time-lapse effect.

In addition acetic acid (AASS) or copper chloride (CASS) can also be used further spray additions. Salt spray tests are also combined with other corrosion tests into so-called cyclic corrosion tests, in which a wide variety of phases are run cyclical.

Included in the features of the RSI corrosion test cabinets and top-loading furnaces:

- Standard-conforming structure acc. to **ISO 9227**
DIN EN 600068-2-11
ISO 6270-2
ISO 11997-1
- Test chamber made of polypropylene or stainless steel custom materials
- Ergonomic touch panel
- Integrated measurement data acquisition
- Metering of the salt spray solution via regulated diaphragm pump
- Solution tank with free access for the operating personnel
- Diverse options and customer-specific solutions

TLC 550
Volumes: 550 l, 750 l, 950 l, 1000 l,
1450 l, 2000 l, 2500 l and 3000 l



FLC 1000
Volumes: 500 l, 1000 l, 1500 l, 2000 l,
3000 l and 4000 l





WLC 12000
Volumes: 4000 l, 6000 l, 8000 l, 10000 l and 12000 l



WLC SERIES

WALK-IN TEST CHAMBERS

Sometimes it even needs to be bigger. The variety of test specimen geometries now also demands with increasing frequency walk-in test chambers. Hundreds of DIN test plates can be tested simultaneously via adapted test plate carriers or large and heavy test specimen, such as energy storage systems or photovoltaic modules find their test location. The chamber dimensions can be designed specifically to your test requirements.

Included in the features of the walk-in RSI corrosion test chambers:

- Standard-conforming structure acc. to **ISO 9227**
DIN EN 60068-2-11
ISO 6270-2
ISO 11997-1
- Test chamber made of polypropylene or stainless steel custom materials
- Underneath accessible designs possible
- Extension rails
- Ergonomic touch panel
- Integrated measurement data acquisition
- Metering of the salt spray solution via regulated diaphragm pumps
- Solution tank with free access for the operating personnel
- Diverse options and customer-specific solutions

PLUS⁺ SERIES

CORROSION TEST DEVICES WITH DEEP-FREEZING

New modern corrosion tests are increasingly complex and more versatile. Through the progression of sophisticated temperature and humidity cycles up to frozen storage, it is attempted to recreate comparable and time-lapse actual environmental conditions.

For this we offer test cabinets and chambers with a wide variety of options.

Included in the features:

- Standard-conforming structure acc. to **DIN 55635 (VDA 233-102)**
ISO 9227
ISO 6270-2
- Negative temperature range
- Expanded climate control
- Test chamber made of plastic or stainless steel custom materials
- Ergonomic touch panel
- Integrated measurement data acquisition
- Ergonomic touch panel
- Metering of the salt spray solution via regulated diaphragm pump
- Diverse options and customer-specific solutions



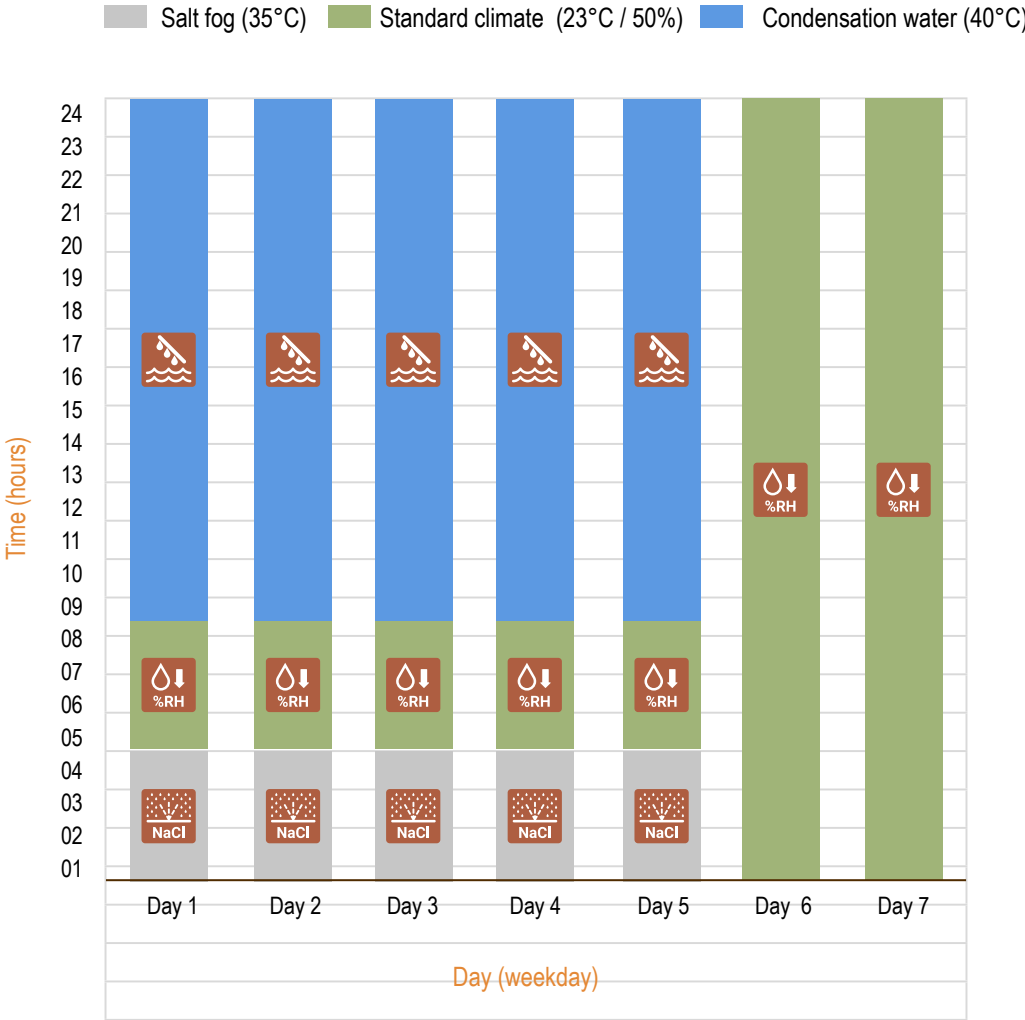
FLC 1000 PLUS⁺
Volumes: 1000 l to 12000 l



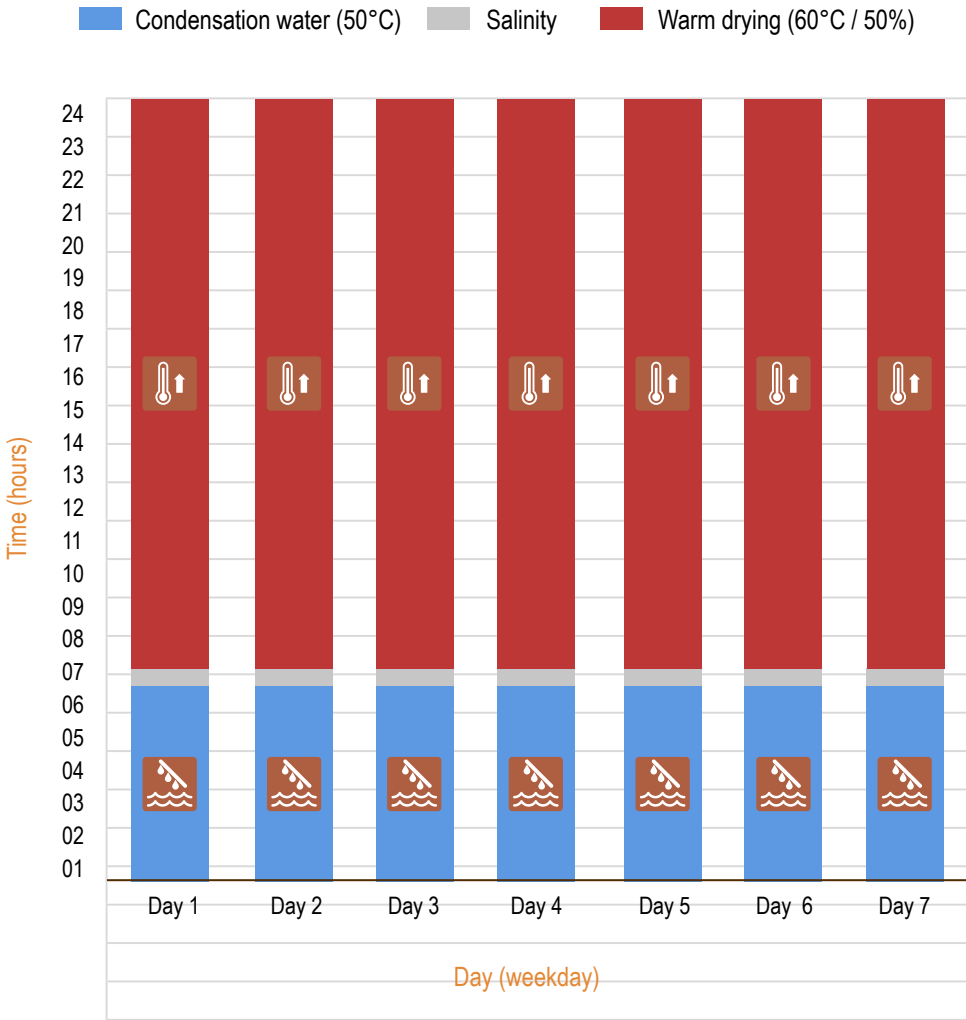
TEST CYCLES

EXPLAINED SIMPLY

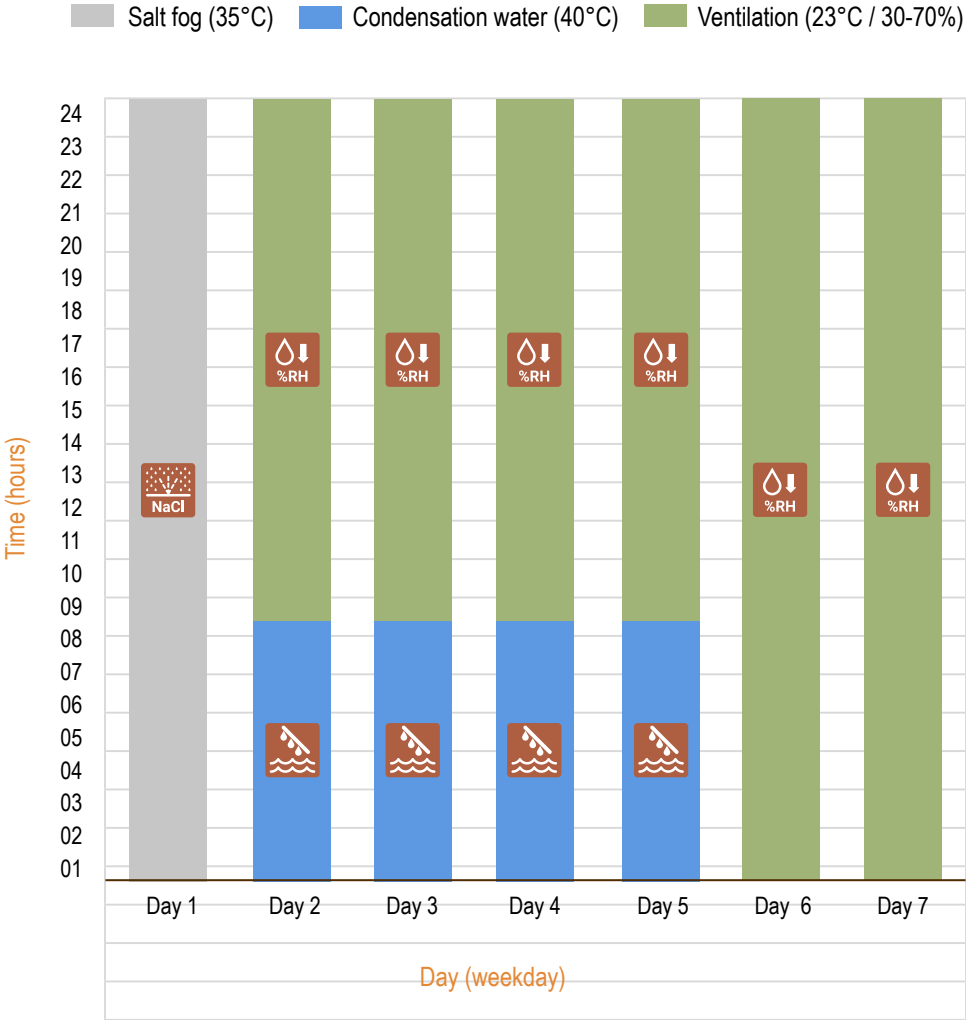
VW PV 1210



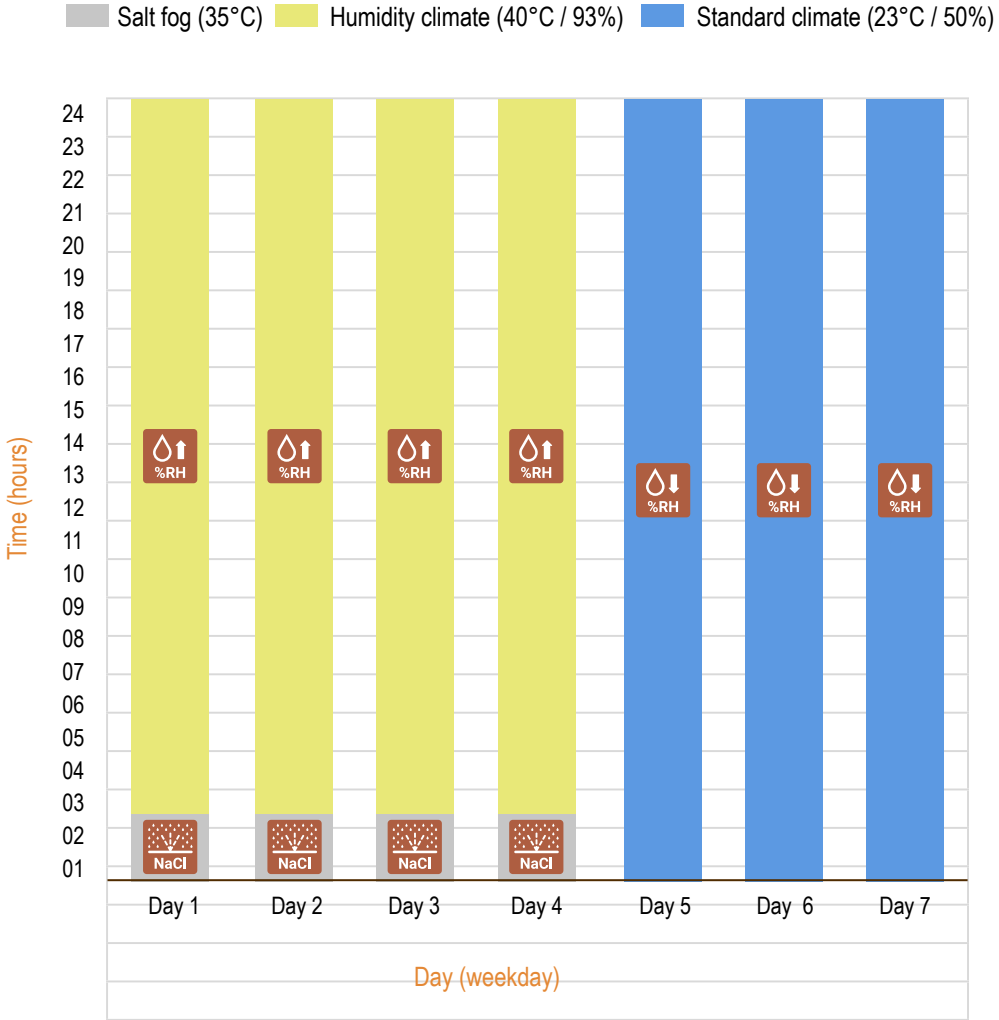
SAE J2334

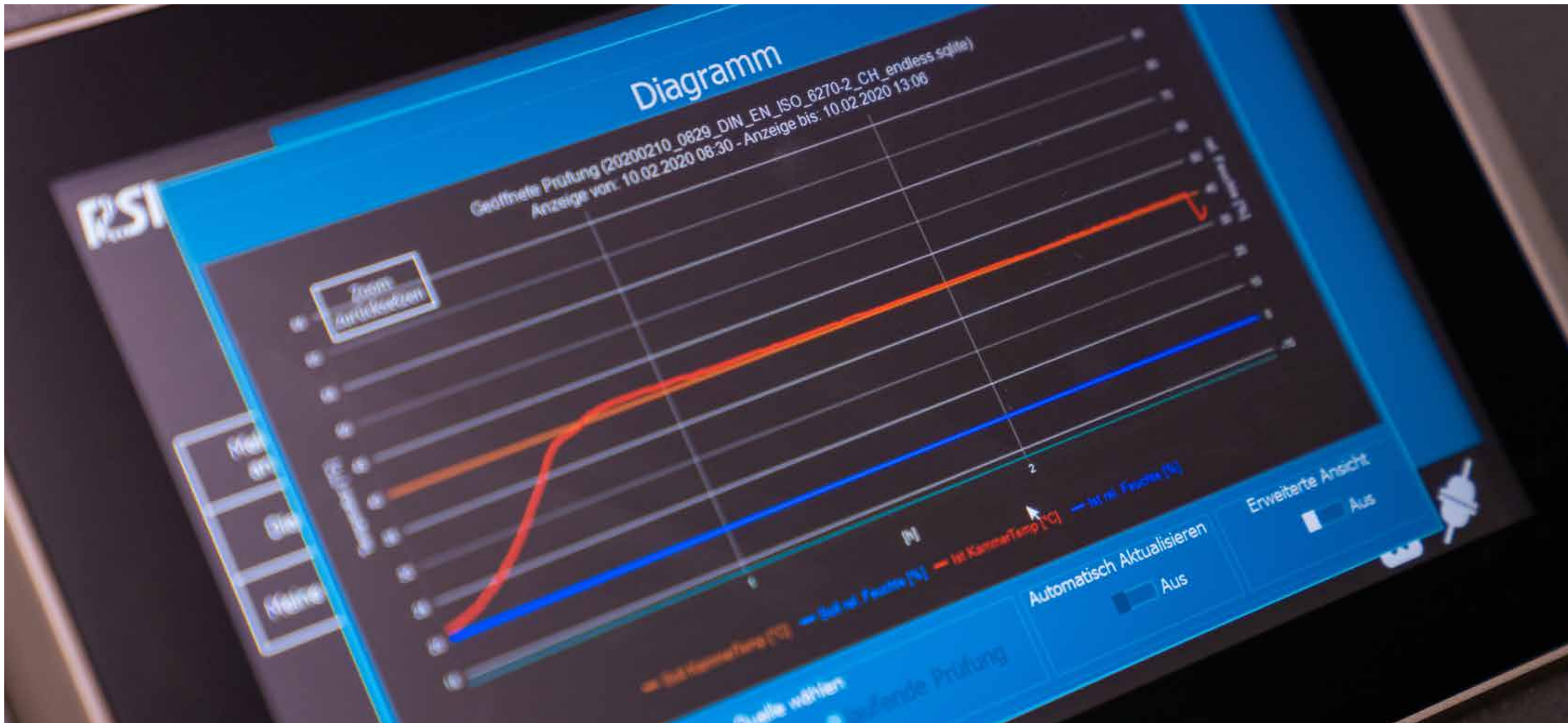


ISO 11997-1 Cycle B



EN 60068-2-52 Test procedures 3





LARGE RANGE OF STANDARD EQUIPMENT AND OTHER ACCESSORIES

In addition to the basic equipment you receive from us a variety of useful additional options:

- Hydrometer
- Support rods
- Grate for accepting heavy test pieces
- Precipitation measuring funnel ISO 9227
- pH value measuring device
- Test plate holder for diagonal test plate arrangement
- Test plate holder for horizontal test plate arrangement
- Test plates for function control
- Test chamber flushing system
- Refractometer
- Scratch stylus acc. to Sikkens
- Scratch stylus acc. to van Laar
- Mixer for solution tank
- Salt in standard quality
- Deionising cartridge with conductivity measuring device
- Wall pass through
- Factory calibration certificate



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