

**TQC MANUAL CUPPING TEST**  
SP4400

DATASHEET

**PRODUCT DESCRIPTION**

Revolutionary apparatus for testing the resistivity of coatings at various stages of deformation in accordance with ISO 1520. The built in gear-box minimizes the manual force which is required to deform the test panel, allowing to perform a smooth deformation. The degree of deformation is digitally displayed at a resolution of 0.01 mm. Mandatory test in Qualicoat, QIB and GSB accredited laboratories.

**BUSINESS**

Steel protection, galvanize, laboratory, coating industry, paint,

**STANDARDS**

EN-ISO 1520, BS 3900 E4

Look up the appropriate standard for a correct execution of the test.

**FEATURES**

- Low effort operation
- Small Footprint
- On request left hand model available

**SCOPE OF SUPPLY**

- TQC Manual cupping test
- Digital micrometer
- Calibration plate
- 1mm Allen key
- User manual

**ORDERING INFORMATION**

SP4400 TQC Manual cupping test

**ACCESSORIES**

TQC Test Panels are available in a large variety of dimensions, materials and thicknesses. Use of TQC Test panels enhances reproducibility of physical and chemical tests.

Each panel is equipped with a hole for hanging and handling.

Not only standard test panels are available. Special dimensions to customers specifications are possible as well. Please contact TQC for our special [brochure](#)

## SPECIFICATIONS

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Max. sample thickness:	: 1,2 mm. (steel or aluminum)
Max. sample width	: 95 mm.
Max sample length	: infinite
Punch diameter	: 20 mm. /hardened steel
Die diameter	: 27mm. /hardened steel
Gauge resolution	: 0,01 mm.
Cupping Range/Stroke	: 14 mm.
Displacement per revolution	: 0.48 mm per handle revolution
Instrument Height	: 2940 mm.
Instrument Width	: 340 mm. (including handles)
Instrument depth	: 292 mm
Total weight	: 16 kg.
Materials	: Anodized aluminum, Stainless steel, Powdercoated steel, Tungsten Carbide steel

## USE

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- Place the test sample with the coated side up inside the clamp. Do not exceed the panel thickness as stated in the specifications and on the machine. Testing on thicker panels can damage the drive shaft and cause deformations that could render the device unusable.
- Close the camp to hold the panel in place. Do not use force when clamping, otherwise when removing the panel the required force to release the panel can be to high for the operator.
- Turn on the micrometer.
- Gently turn the handle to raise the indenter. To get an indentation speed of about 0.2mm/s requires about half a revolution per second.
- The test is carried out either to a predetermined indentation depth at where the panel is evaluated or defects in the coating or to the depth where the first defects in the coating form.
- After the results have been determined turn the indenter back to below the zero position.
- Release the sample clamp and remove the sample.

## SPECIAL CARE

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- Though robust in design, this instrument is precision-machined. Never drop it or knock it over
- Always clean the instrument after use.
- Clean the instrument using a soft dry cloth. Never clean the instrument by any mechanical means such as a wire brush or abrasive paper. This may cause, just like the use of aggressive cleaning agents, permanent damage.
- Do not use compressed air to clean the instrument.
- Always keep the instrument in its case when not in use.
- We recommend annual calibration

## **SAFETY PRECAUTIONS**

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- Never put limbs in the clamping area.
- Always have the clamp properly tightened during testing
- Never test chattering or breaking materials like glass or acrylics that chatter when exerted to high forces.
- Avoid using it in over-high or over-low temperature environment .
- Avoid humidity .

## **DISCLAIMER**

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The right of technical modifications is reserved.

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.