
TQC
sheen
Developers and manufacturers of
paint test equipment


TQC SHEEN,
DEVELOPERS AND
MANUFACTURERS OF
PAINT TEST EQUIPMENT
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TQC Sheen designs and produces field measuring instruments and lab equipment for testing paint and coatings and general surface treatment.

Production facility
TQC Sheen's objective is to create and offer solutions for every possible QC-application in surface technology. TQC Sheen products are known for their ergonomic features and user friendliness. The production facility is located in The Netherlands. In order to complete the TQC Sheen range the company works closely together with renowned manufacturers from all over the world.

Global distribution
TQC Sheen has offices in the Netherlands, Germany, Italy, United Kingdom, Norway, Korea, China, Singapore and North America, and works closely together with a global network of distributors in more than 60 countries. The TQC Sheen product range focuses mainly on three different market sectors; Paint Research and Development Laboratories and Quality Control, Protective and Marine Coatings Applications, Surface Finishing Industry.

History and innovation
In October 2017 TQC BV. has acquired Sheen Instruments LTD. Sheen Instruments has a history of over 70 years being manufacturers of laboratory equipment for the paint industry. TQC is a manufacturer of paint test equipment renowned for their innovative approach and ground breaking developments.

Both companies are joining forces now and the two brands are being merged in the new TQC Sheen label. The new name represents the best of both worlds: Innovation & History.

Extensive range
The new label represents perhaps the most extensive range of paint test equipment varying from a vast range of viscosity meters, automatic film applicators, scrub and scratch testers to gloss & colour meters, thickness gauges, drying time testers etc..

TQC Sheen's production facility is located in The Netherlands

TQC Sheen has distributors in more than 60 countries

VISCOSITY

DIGITAL ROTOTHINNER

The TQC Sheen Digital Rotothinner™ is used for determination of the viscosity in P or cP, as used in the paint, coating and ink industry. It is equipped with a clear display, easy user interface and ensures high reproducible results measurement after measurement.

3 modes

The TQC Sheen Digital Rotothinner™ can be used in 3 modes; Manual: Max-hold and Timed. A superb stable drive system creates a wider measurement range and more accurate readings.

The meter is both highly accurate and simple to use, making it suitable for research as well as production environment.

Features

- easy to use
- highly accurate
- manual and automatic operation
- four lines digital display with backlight
- level adapter set (½ pint, 1 pint) included
- Calibration certificate included
- 240V/110V power adapter

Viscosity

The higher the viscosity of a product the more it will resist to flow. Non Newtonian fluids are time and force dependent.

When the amount of force influences viscosity special equipment, like a Rotothinner or a gel strength tester will be required. In production environ-

DIGITAL KREBS VISCOMETER

Based on the popular traditional KREBS method, using a weight-driven rotating paddle to sense the paint viscosity at a constant 200 rpm, this modern digital instrument provides automated motor operation, without weights & pulley, allowing accurate direct reading in KU (Krebs units), mPa·s (cP) or g (gram).

Automatic Conversion

The conversion between these units is automatically calculated by the microprocessor and displayed on request. Sturdy construction allows for use either in a production environment or in the laboratory.

Features

- Single or continuous reading in KU, mPa·s (cP), gram
- Over-range indication
- Simple to install rotor spindle into quick release chuck
- Easy to clean
- Safety height sensor preventing the rotor from rotating above the can
- Possibility of multi-point calibration by user with optional key
- Memory for 9 readings, RS232 serial interface to printer
- Standard package: Viscometer, rotor spindle, 1 pint (500 ml) / Ø85 mm can, printer cable.

ments where the non-Newtonian properties of a product are not required to be known exactly, flow cups are broadly used. TQC offers flow cups according to or similar to ISO 2431, DIN 53211, ASTM 1200 'Ford', AFNOR. Most of these cups are also available as dip-type. TQC Sheen also supplies all necessary accessories such as tripods, thermometers, stopwatches and temperature control jackets.

GEL STRENGTH TESTER

This instrument is especially suited to assess the yield strength and consistency of thick paints and other materials such as gels and putties etc.. A 250 ml can containing the sample is magnetically fastened onto a turntable, which is loaded with a calibrated spring displaying an engraved scale of 0-450 gm/ cm. When immersed into the sample, the flat 4 x 2 cm paddle spindle rotates automatically at 2 rpm, and drives the whole can & turntable.

After a peak reading followed by a short time of stabilisation, a steady torque value is indicated on the scale. Other paddle sizes are available on request.

Features

- Electronic constant speed control over the full range
- Paddle spindle simple to install with quick release chuck
- Easy to clean
- Safety height sensor preventing the rotor from rotating above the can
- Sturdy construction for use either in lab or production line
- Standard package: Viscometer, paddle spindle, 250 ml / Ø85 mm can220-240V - 50 Hz
- 250 ml / Ø85 mm can.
- 220-240V - 50 Hz

TQC sheen

CONE AND PLATE VISCOMETER

This standard test for dynamic viscosity measurements is now faster and more accurate by use of new high precision micro-processor controls. As non-Newtonian fluids exhibit different viscosities relative to the shear rate applied, the cone and plate viscometer tightly controls it to 10,000S^{-1} (B.S. requirements) or to 12,000S^{-1} (ASTM). These are generally accepted to be representative of paint application via a roller or brush and so reflect 'real world' application.

Temperature controlled

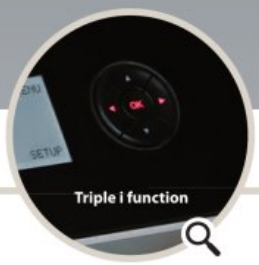
As most viscosity measurements are highly temperature sensitive the samples are placed on a temperature controlled plate which can be set from 5 to 65°C (41 - 149 °F). All cone kits are interchangeable for various viscosities.

Features

- Temperature controlled plate
- Quick release chuck for rapid cleaning / replacement
- Menu guided LCD display
- Hard wearing titanium nitride cone / plate assembly
- 20 reading memory
- RS232 output: parallel or serial, printer or computer
- Full Auto zero
- Single or continuous reading
- Simple calibration procedure

AUTOMATIC FILM APPLICATOR

Compact



The AFA Compact is an entry level film applicator that accepts charts up to A4 size. Application speed can be set from 1 to 150 mm/s. The Compact is suitable for both wire bar applicators and block applicators. Operating is easy through the standard TQC Sheen operating interface. The AFA Compact is available with a glass bed or a perforated vacuum bed.

Triple i function

The TQC Sheen's Automatic Film Applicators are quite simple to operate by means of the menu in the display and the 5-key navigation switch. The 5-key navigation switch is equipped with the unique Triple i function (Intelligent Illumination Interface). Triple i enhances the intuitive operation by illuminating just those keys that are active in combination with the position in the operating menu.

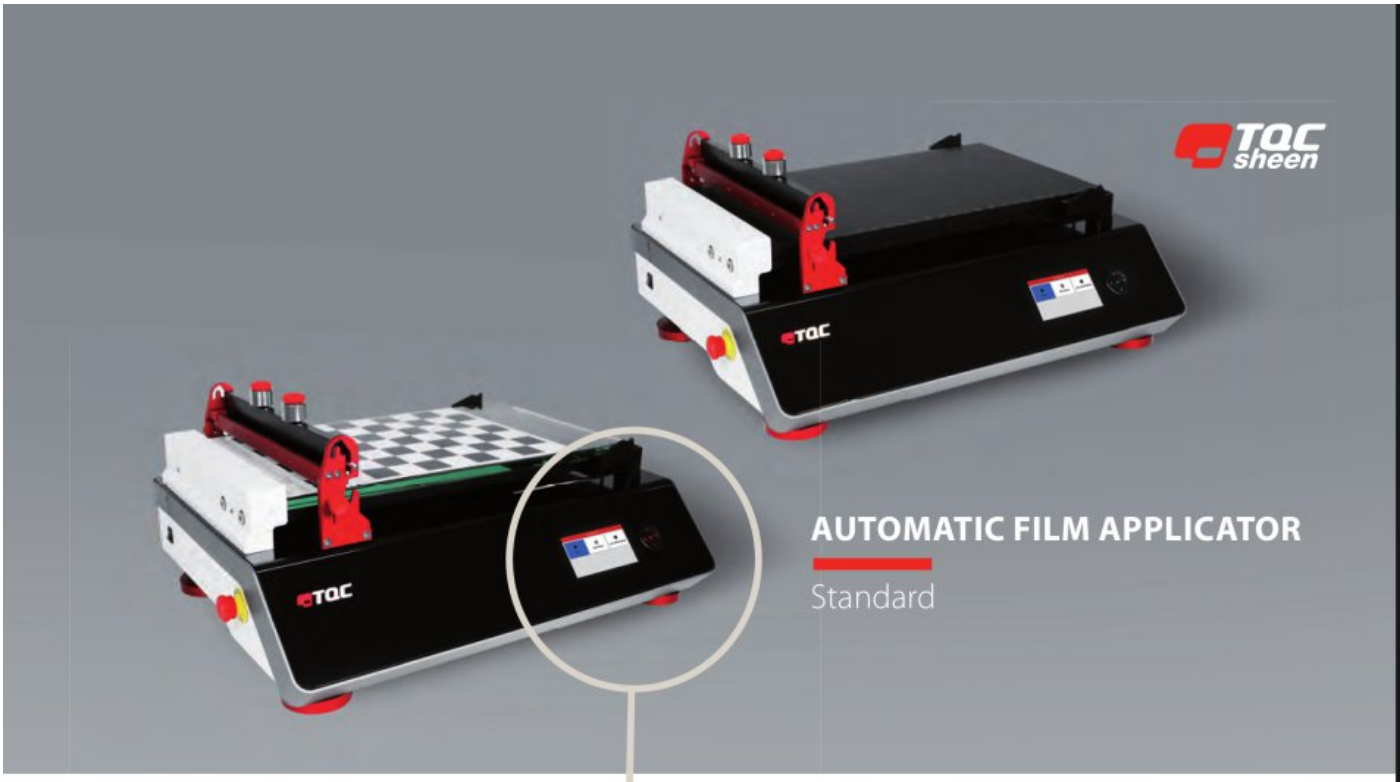
Features

- Traverse speed infinitely adjustable
- Supplied with drip pan and paper holder
- Triple i Control (Intelligent Illumination Interface)
- Traverse speed 1 - 150 mm/s/ 0.03 - 5.90 in/s
- Charts up to A4 size
- Compatible with a large range of application tools
- Very accurate traverse speed < 1%
- Safe 24V powered

Several tools are available that give automatic film application with the AFA Standard an extra dimension:

Block applicator weigth

Enhances the contact with the surface for a more stable applicator movement this stabilizing the applied film thickness.



AUTOMATIC FILM APPLICATOR

Standard

The TQC Sheen AFA Standard provides a reliable basis to apply coating films to test charts, panels or foils in a uniform and reproducible way in order to eliminate variations caused by human factors. Variations in speed, pressure and direction of draw down cause irregularities. Other factors that may influence the result are the shear rate and the weight of the applicator.

Research on rheological properties

The quality of the applied film is important for research on rheological properties of the applied media. To prepare samples for testing rheological properties, abrasion resistance, hiding power and gloss the TQC Automatic Film Applicator Standard is a must have.

The TQC Sheen Automatic Film applicator is also available with an electrically heated vacuumbed. The temperature can be set digitally from ambient +5°C to ambient + 100°C . Heat-up time is short and temperature is uniform over the entire bed.

Features

- Paper Clamp / Vacuum manually operable
- Triple i Control (Intelligent Illumination Interface)
- Full color display
- Charts up to A3 size
- Compatible with a large range of application tools
- Easy to update software
- Preset range option

Hardness Pen tool

Enhances the reproducibility of a hardness test performed with a hardness test pen.

Drying Time Recorder Tool

Converts the Automatic Film Applicator 'Standard' into a drying time recorder.

Grindometer Tool

Enhances the reproducibility of a fineness of grind test with a grindometer

FILMFUGE APPLICATORS

FILM APPLICATION

Centrifugal applicators provide perfectly reliable spin-coated samples. Complementary to conventional techniques, this method offers efficiency and flexibility to daily sample preparation process.
Just fix a panel onto the turntable, pour a known volume of coating onto the centre, close the lid and start the unit. The centrifugal force creates a uniform coating. The thickness is determined by the rotational speed, nature of the product and panel type. Fully progammable operating parameters, ease of use and high safety makes this apparatus a must-have in all laboratories.

To fulfil most sample size requirements, two models are available. One for small 100 x 150 mm (3,9 x 5,9 inch) panels, and one for larger 300 x 300 mm (11,8 x 11,8 inch) panels.

Features

- Programmable time: 10s to 150min, in 10s increments
- Programmable speed: 250 to 2500 rpm, in 10rpm increments
- LCD display with preset speed, remaining time and actual speed
- Automatic lock of the lid during operation
- Emergency stop button
- Removable aluminium turntable and collecting tray eases cleaning
- 90 – 254V, 50/60Hz

PNEUMATIC PANEL SPRAYERS

Consistency in coating application is absolutely essential for subsequent evaluation of colour, gloss, opacity and general appearance, also physical properties including thickness, sagging, levelling and adhesion. Evaluation of these properties is particularly important when applying high performance coatings such as metallic, pearlescent paints and special effect coatings.

Very consistent

The TQC Sheen panel sprayers remove the variations in consistency that is experienced when using hand held guns, thus offering a means to set optimum, repeatable conditions to achieve consistent results.

Customizable

The Panel Sprayers are fully pneumatic and have been developed in association with major coating manufacturers. TQC Sheen offers many options to customise the panel sprayer for your individual requirements.

Setting parameters

The sprayers offer the means to set the atomisation, coating build, flash off timing, flow/levelling, film thickness, gun traverse speeds and accelerated drying, these settings are particularly important when defining the characteristics of new formulations.

Optimum settings

Once the optimum settings for a product have been achieved they can be easily reproduced for quality control for further sampling, thus enabling identification of any inconsistences in formulation or preparation.

Features

- Easy to operate controls
- All functions and movements are operated by compressed air
- Adjustable gun to panel distance, gun travel speed and spray pressure
- Adjustable panel lift increments (for achieving optimum over spray of previous pass of the spray gun)
- Flash off timer, to enable optimum setting of rest period between each coating
- Magnetic panel holders (Vacuum holders for non-metallic panels)
- Suitable for use in all spray booths
- Emergency and Reset button
- Easy access to internal parts/mechanism for simplified service and cleaning
- Fitted with integral air filters and regulators

APPLICATORS
TEST CHARTS
APPLICATION TABLES

Applicators

TQC Sheen applicator types come as Bird, Baker, Wire Bar, Micrometer adjustable, Cube, Sag and Leveling, Quadruplex, Octoplex, etc.. The choice depends on specification or what one is accustomed to. Applicators vary in width, single or multiple gap, clearance in either microns or mils, height adjustable or not, or wired in different sizes. If the applicator is used manually variables in speed and movement can cause an uneven drawdown. In these cases we recommend an automatic film applicator.

Test charts

TQC Sheen offers a wide range of consistent test charts for testing physical properties of coating, lacquers and inks. Suitable for determining hiding power, opacity and spreading rate. Test Charts come in a variety of prints and dimensions from DIN A6 up to and including DIN A4. Also available is a special Washability opacity scrub chart. All charts are film laminated for an excellent solvent and chemical resistance and an even film spread. On each chart there is a section for filling out the date, time and test number. Special designs are possible with quantities over 10.000 pieces per chart.

Application tables

When you choose to apply films manually a stable hard surface is needed. This enhances the degree of reproducibility of a drawdown on test charts. TQC Sheen glass application tables are equipped with a strong clamp to hold down the charts and supplied with rubber top cover for use with specific applicators. The glass application tables are available in several sizes.

The TQC Sheen Scrub Abrasion and Washability Tester is used to test the resistence of paint, varnish or coatings to scratching, wearing, and color loss due to wet or dry abrasion, by simulating everyday wear from cleaning actions or general use. The test is either used as a "pass or fail" test by testing to a specified number of strokes or defining the minimum number of strokes at which a coating fails by checking at regular intervals. The TQC Sheen Scrub Abrasion and Washability Tester is suitable for a wide range of scrub, abrasion and washability tests that are in use.

Features

- Preset
- Triple i Control
- Display
- Software
- Movement
- Accessories

Scrub Abrasion Washability Chart

Especially designed for application on the new TQC Sheen Automatic Film Applicator 'Standard', and for use on the TQC Sheen Scrub, Abrasion, Washability Tester:
TQC Sheen Scrub Abrasion Washability Charts. With black and white print.

DRYING TIME RECORDER

The TQC Sheen Drying Time Recorder is a fully digitally controlled machine to define the different stages in the drying process of paints and coatings. The TQC Drying Time Recorder operates conform the BK (Beck Koller) method. Defining the final result or checking intermediate stages is very easy by means of the clear digital display and the intuitive interface. The compact machine meets ASTM D5895, ISO 9117-4 and DIN EN 14022. The TQC Sheen Drying Time Recorder has six tracks, and comes with two robust and reusable glass beds of 100 X 350 X 3 mm. Optional are six narrow glass beds in special adapters. The front panel of the TQC Sheen Drying Time Recorder is made out of clear glass, which is easy to clean and protects the display underneath. The TQC Sheen Drying Time Recorder is powered by a safe 24 V DC power supply.

The operating range of the TQC Sheen Drying Time Recorder is from -20°C to +70°C .

Temperature-friendly Design

The possibility to perform tests at temperatures as low as -20 °C is unique. The drive system is lubricant free, so there is no risk of lubricants that thicken at lower temperatures. The display is heated which enhances menu visibility at lower temperatures. These design features result in a wide operating temperature range from -20°C to +70°C (non-condensing), which makes it possible to perform tests in climate chambers.

Time indicator - A broad and flexible time range can be set varying from 1 minute up to 200 hours. The TQC Sheen Drying

Features

- Flexible travel times
- Check intermediate and final results
- Enhanced menu visibility
- Lubricant free drive system
- Triple I operating interface

Time Recorder is suitable for fast drying waterborne coatings as well as very slow drying paints.

Broad and flexible time range

A broad and flexible time range can be set varying from 1 minute up to 200 hours. This makes the TQC Sheen Drying Time Recorder suitable for fast drying waterborne coatings as well as very slow drying paints that may need days to dry. Time settings are very accurate, < 1 % of set time.

- Very accurate
- Glass front panel
- Reusable glass beds
- Safe 24 V DC power supply
- Six tracks

Drying time

A casterguide is NOT required for the TQC Sheen Drying time recorders, which are standard equipped with wide panels which most prefer.

Wide panels are not suitable for a casterguide but paint can easily be applied using TQC Sheen'sTriple reservoir applicator. When using narrow panels the TQC Sheen Cube applicators are standard equipped with a guide plate that eliminates the need for a casterguide and simply allow the user to apply straight draw downs on the narrow glass panel. No extra costs, no extra cleaning, no extra tool.

COMPREHENSIVE ABRASION TESTER

The TQC Sheen Comprehensive Abrasion Tester (CAT) replicates the behaviour of beverage cans during transportation. Failures resulting from scuffing and friction may be very costly for a drinks manufacturer if the result is leaks from a pressurised can wrecking a whole pallet load, or more.

TQC Sheen's CAT is a universal test machine for testing coating quality on beverage cans. Its reciprocating motion of the cans mimics in-the-field transportation damage of drink cans.

Tests can be performed with many different can sizes which can easily be loaded and unloaded.

Parameters such as pneumatic top and side pressure, traverse movement and test length can be programmed with the supplied software. If leakage occurs during test, the liquid is collected in a spill drawer which can be emptied easily. The use of pneumatics guarantees long life, low maintenance, and a high level of accuracy.

Features

- Test abrasion resistance of coatings
- Reciprocating motion of beverage cans
- Mimics in-the-field transportation damage
- Menu-driven operation
- High level of accuracy
- Spill drawer
- Pneumatics guarantee long life and low maintenance

AUTOMATIC SCRATCH TESTER

This motorised apparatus is dedicated to coatings hardness evaluation based on scratching resistance method. A test panel is clamped and slowly moved whilst a stylus or alternative tool scratches the surface. Depending on test procedures, specified or variable loads can be applied to obtain different degrees of failure, from trace to destruction. A voltmeter indicates the contact of the tool with the metallic sample substrate.

The maximum panel size is 100x150x1.6 mm with 0.3x5.9x0.006 inch with 0.01inch coating.

Features

- Robust construction, reliable and reproducible results
- Simple maintenance, easy to replace tools
- 220-240V / 50Hz (110-120V / 60Hz on request, please specify)

Hardness

The hardness of the coatings is generally understood as the impression value at which a deformation of the coating occurs. This is determined by pressing a sharp or blunt stylus, depending on the material or coating, into the surface. Another method to measure hardness is the determination of rolling resistance of a coated surface.

Available TQC Sheen Hardness tests:

- Pendulum hardness test
- Impact tester
- Buchholz hardness indentation test
- Manual scratch hardness pen
- Pencil hardness test according Wolff Wilborn
- Durometer Shore hardness test

CUREVIEW GRADIENT OVEN

The CureView Gradient Oven is a flexible oven that allows the user to heat up test panels on a glass bed to a variety of temperature profiles, varying from ambient +5˚C to 350˚C / ambient +41˚F to 662˚F. Elevated temperatures are instantly generated by 32 spectral filtered IR halogen heaters, which can be controlled individually and allow the setting of any form of temperature gradient, varying from a parabolic shaped gradient, an ascending or descending slope or a number of temperature blocks. The CureView Gradient Oven allows importing of gradient profiles, measured by the TQC CurveX oven logger system in order to simulate the production process on laboratory scale.

Features

- Start/Stop operation
- Buzzer
- Safety
- Software
- Automated Transport
- Cooling
- 32 IR Heaters
- Data Import
- Visibility

CurveX oven tracking system

The CurveX system offers easy to use, high quality temperature data logging for paint curing ovens. A wide range of loggers and related accessories are available: Basic, standard and special can coater loggers, surface, air and universal temperature probes for different temperature ranges, insulation boxes (also silicon free models and high temperature models), heat sinks etc.

TQC Sheen's Ideal Finish Analysis Software offers user friendly reporting of standard production work as well as advanced calculations for in depth analysis.

Ultrasonic Wall Thickness Gauges

Ultraschallwanddicken-messgeräte
Spessimetri ad Ultrasuoni per Materiali
Ultrasone Wanddiktemeters
Ultralyd Vegg Tykkelsesmåler

Pressure Density Cup (Pyknometer)

Druckpyknometer/Pressure density cup
Picnometro a pressione
Druk pyknometer
Trykk pyknometer

Grindometers

Grindometer
Grindometri
Grindometers
Grindometer

Pyknometers

Pyknometer
Picnometri
Pyknometers
Pyknometer

Karsten Tube Penetration Test

Karsten-Rohr Penetrationstest
Test di penetrazione con tubo Karsten
Karsten-buis indring-test
Karsten tube penetration test

Glossmeter Sologloss, Duogloss, Polygloss

Glanzmessgerät
Glossmetro
Glansmeter
Glansmåler

RAL Charts

RAL Farbkarten
RAL Cartella colori
RAL kleurkaarten
RAL fargekart

Conical Bend Test

Konischer Dornbiegeprüfer
Mandrino conico
Konische buigtest
Konisk bøyningstest

Cupping Testers

Tiefungsprüfgeräte
Prove di inbutitura
Deukproef cupping testers
Cuppingtester

Impact Testers

Kugelschlag-Prüfgeräte
Prove d'impatto a caduta
Valproef impacttesters
Dropptester

Illuminated Assessment Cabinets

Farbabmusterungs-kabinen
Cabine luci
Lichtkabinetten voor visuele inspectie
Lysskap

Wet Film Thickness Combs

TQC Nassfilmkämme
Spessimetri a pettine
Natte laagdiktemeters - kam
Våtfilmmåler

Cross-cut Adhesion Testers

Gitterschnitt-Adhäsionstester
Prove di quadrettatura
Ruitjesproef adhesietesters
Gittersnitt vedheftstester

Low Voltage Pinhole Detector

Niederspannungsporenprüfgerät
Porosimetro a bassa tensione
Laagspanning pinhole detector
Lavspent poresøker

PowderTAG Thickness Analysing Gauge

Pulverschichtdickenmessgerät
Misuratore di spessore su vernici in polvere
PowderTAG laagdiktemeter
Pulver beleggtykkelsesmåler

And much more ...

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