

Automatic Film Applicator Standard with perforated heated vacuum bed

(AB4400, AB4405)

Product Description

The TQC Sheen Automatic Film Applicator 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.

Reproducible

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. With the TQC Sheen Automatic Film Applicator these variable factors are being stabilised. Over the complete surface the film thickness is even. Samples created with the Automatic film applicator are reproducible. It's possible to produce a large number of identical laboratory precision draw downs in a short period of time.

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 Automatic film applicator is a must have. Multiple types of automatic film applicators are available for either glass/paper/metal substrates or foils.

Heated bed

The vacuum bed has a built-in heating mat which allows the temperature of the table to be elevated up to +100°C above ambient temperature. The powerful heating device guarantees an even distribution of the temperature over the entire vacuum plate. Temperature is set and controlled by means of the Triple I® Navigation tool, Intelligent Illumination Interface. This unique system guides the operator through the interface of TQC Sheen lab-machines. At each step of the operating menu the interface detects which buttons are active and indicates these by means of an illuminated red centre. This results in a very intuitive operating system which is enhanced with information on the machine's display.

Block- and spiral applicators

All models can be used in combination with either standard block type film applicators such as bird/baker models, or spiral bar type film applicators (wire wound rod type) depending on the configuration.

Features

- Even temperature distribution
- Digital temperature control
- To be used with charts, foils, panels and other flat surfaces
- Durable and inert surface with an absolute flatness

- Vacuum keeps the test specimen in position
- Full Color Display and Triple I® Operating Interface
- Digital setting of speed, start position, stop position and stroke length
- Large memory to store customer setups to minimise setup time and possible setup errors.
- Wide speed range of 0-500 mm./ sec.
- Silent built-in vacuum pump and heating device
- Tool carrier height can be increased to allow coating of thicker panels / samples.
- Moto-driven, automatic chart clamp to secure and release test charts automatically thus speeding up workflow and enhancing ergonomics.
- Compatible with a large range of application tools
- Automatic spiral bar-coater retriever
- Safety stop
- USB port for, amongst others, operating the machine with a full size keyboard or computer mouse

Business / Applications

- Apply adhesives, glue and hot melt on test specimen to evaluate bonding strength at different thicknesses and different temperatures.
- Apply slurries on metal foils for research into new thin film technologies in the battery production industry.
- Produce reproducible test charts and specimen for scrub -, abrasion- and washability tests.
- Apply even and consistent films of paint and coatings on test charts to evaluate opacity, hiding power, penetration resistance, spreading rate.
- Produce consistent and reproducible test charts for colour comparison, gloss and reflectance testing and other appearance parameters.

Scope of Supply

- TQC Sheen Automatic Film Applicator Standard with heated perforated bed
- 24V Adapter + Power Cable
- 230 VAC /115 VAC power cable
- Wire bar weight, extra weights and screws
- Splash shield
- Manual

Specifications

Technical Data

Traverse speed:	0.1 - 500 mm/s / 0.004 – 19.7 in/s
Traverse speed accuracy:	+/- 1% of set speed
Stroke length:	50 - 430 mm / 1.97 – 16.93 in
Stroke length accuracy:	+/- 2 mm / +/- 0.08 in
Max. test chart size:	515 x 300 mm / 20.28 x 11.81 in
Max. test chart thickness:	9 mm / 0.35 in
Max. test substrate thickness:	35 mm / 1.38 in incl. coating
Max. vacuum area:	DIN A3 / Scrub
Automatic vacuum areas:	A3. The vacuum of the AB4400 / AB4405 always operates on A3. If smaller test charts are used an A3 sized paper frame has to be created to protect the holes from paint walk.
Wire bar spiral area:	Max. 325 mm / max. 12.8 in
Min. Wire bar length:	345 mm / 13.58 in
Max. Wire bar diameter:	10 mm / 0.39 in at fixation points
Width alternative applicators:	Max. 300 mm / max. 11.81 in
Height alternative applicators:	10 -80 mm / 0.39 - 3.15 in
Minimum temperature:	Ambient +5 °C
Maximum temperature:	Ambient +100 °C (Absolute max 125 °C)
Resolution of set temperature:	1 °C
Resolution of readout temperature:	0.1°C
Temperature controller:	Integrated
Power consumption heating:	450 Watt
Power Supply:	115 / 230 VAC, 50 / 60 Hz

Dimensions and Weight

Depth:	490 mm / 19.29 in
Width:	640 mm / 25.2 in
Height:	290 mm / 11.42 in
Weight:	33 kg / 72.75 lbs

Basic Unit

Power Supply*	24 V DC / 100-240 W, 50-60 Hz
Power Consumption	Max. 50 W
Display	480 x 272 pixel TFT display

Special Care

- Always clean the instrument after use.
- Do not use compressed air to clean the instrument.
- Never perform repairs or service to the instrument yourself. This should be done by TQC Sheen or selected distributors.
- If the instrument is not being used for an extended period of time, the batteries should be removed.

Safety Precautions

- Always make sure the instrument is connected to an earthed socket.
- Maintenance and inspection should be carried out at the correct intervals.
- Operating personnel should be informed before starting with maintenance or repair work.
- Always make sure the instruments power is turned off and the instrument is not connected to a socket while adjusting any electrical component whenever maintenance, inspection or repair work is done.
- Do not open the instrument. In case of malfunction always consult the manufacturer.

Controls

5-button navigation with Triple I[®] control

Menu Languages

Optional: Mouse / keyboard
English, Spanish, Chinese, Polish, German, French, Italian, Japanese, Russian

* According to NEN EN 50160: max 230V +10% (253V); min 230V -10% (207V) during 95% of the measurement time
During the remaining 5% the voltage may be: min: 230V -15% (195V)

Ordering Information

Art nr	Description
AB4400	TQC Sheen Automatic Film Applicator Standard with heated perforated bed - 230VAC
AB4405	TQC Sheen Automatic Film Applicator Standard with heated perforated bed - 115VAC

Accessories

Art nr	Description
AB3075	Grindometer Tool
AB3090	Hardness Pen tool
AB3500	Drying Time Recorder Tool
AB4600	Block Applicator Weight

Spare Parts

Art nr	Description
AB3016	Splash shield

Disclaimer

The right of technical modifications is reserved.

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