

AUTOMATIC FILM APPLICATOR

AB3120, AB3220, AB3320, AB3400, AB3125, AB 3225, AB3325, AB3405

DATASHEET

PRODUCT DESCRIPTION

The TQC Automatic film applicator 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. With the TQC Automatic film applicator these variable factors are being stabilised. Over the complete surface the film thickness is even. Samples created with the TQC 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. 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 is a must have. Multiple types of automatic film applicators are available for either glass/paper/metal substrates or foils. 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 chosen.

**BUSINESS**

Coating Laboratories, Paint Production, Surface Finishing, Powder Coating

FEATURES**Automatic test chart clamp**

Test charts are fixed automatically (when no vacuum bed is used) and also released automatically when the process is finished. This eliminates two steps in the process and the operator does not need to bend over the machine to reach for a clamp.

Easy to clean ultra plane glass bed

Easy to clean ultra plane glass bed with models AB3120 and AB3125

Vacuum bed with built in vacuum pump

Vacuum bed with built in vacuum pump with models AB3220, AB3225, AB3320 and AB3325.

Complete with 2 electronically controlled vacuum area's of DIN A3 and DIN A4* size.

*A4 only for AB3220 and AB3225.

Removable bed for easy cleaning and maintenance

The open structure of the back of the vacuum bed ensures the vacuum holes can be cleaned at all times.

Automatic bar coaters storage device

This positions the bar coaters on a holder at the end of the test chart. The traverse will retract automatically after the application of the film. This eliminates another two steps in the process and generates important time savings.

Flexible

The machine is suitable for all types of applicators. Set-up of length and speed is adjustable in any way the operator chooses while a pre-selection of popular settings is programmed for quick setup.

Wide speed range

Wide speed range of 2 to 500 mm/sec.

Extensive operator safety features

Besides an emergency stop button the machine is equipped with intelligent hand-detectors at the side which will stop the machine immediately when body parts are in immediate proximity of the moving traverse. TQC automatic film applicators comply with directive 2006/42/EG on machinery.

Solid support feet

Extremely robust adjustable feet that guarantee a stable position of the machine to prevent external disturbances.

Menu driven

All settings are made digitally through the multi-lingual menu-driven human interface that offers an intuitive operation using a convenient jog/dial switch. This eliminates the use of a manual.

Operator orientation saves counter space

Display and buttons are located on the short side of the applicator.

Illuminated

To illuminate the working area a flexible light of 5W warm white LED's is standard supplied.

Silent

The integrated vacuum pump of the TQC film applicators is fitted with silencers which decrease the sound level without vacuum from 81 dBa to 66dBa. With the chart in position and vacuum in place the level is 60 dBa.

APPLICATION AREA'S

- Rotogravure / flexo printers for testing of inks and surface coating.
- Liquid inks manufacturers for testing of ink shades / strength and coating.
- Surface coating, metal decorating and picture varnish manufacturers.
- Paper and boards mills, for checking coatings and varnishability of coated paper and board.
- Paint, resins, lacquers, adhesives, dyes and pigment manufacturers.
- Photographic paper, cosmetics and ceramic coolers. Textile printing for testing of colour shades / prints.

Draw down can be made on variety of substrates such as plastic films, paper, board metalized films, metal plates, foil and textiles etc.

SCOPE OF SUPPLY

- Motorised automatic film applicator (one of the available models)
- Rubber placemat (only with glass plate)
- Certificate of Conformance
- English manual
- Power cord

MODELS

- AB3120 TQC motorised automatic film applicator 230V with glass bed and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3220 TQC motorised automatic film applicator 230V with perforated vacuum bed, built-in vacuum pump and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3320 TQC motorised automatic film applicator 230V with double channelled vacuum bed, built-in vacuum pump and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3125 TQC motorised automatic film applicator 110V with glass bed and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3225 TQC motorised automatic film applicator 110V with perforated vacuum bed, built-in vacuum pump and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3325 TQC motorised automatic film applicator 110V with double channelled vacuum bed, built-in vacuum pump and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3400 TQC motorised automatic film applicator 230V with heated perforated vacuum bed, built-in vacuum pump and combined attachment assembly for standard block applicators and wire bar coaters.
- AB3405 TQC motorised automatic film applicator 110V with heated perforated vacuum bed, built-in vacuum pump and combined attachment assembly for standard block applicators and wire bar coaters.

OPTIONAL ITEMS

All types and styles of applicators can be used such as wire wound rods or spiral bar coaters, doctor blades. Bird-, or Baker type applicators, Quadruplex, or film casting knife applicators.

AB3500 - TQC Drying time recorder tool (Only suitable for models with firmware version 2.01 or above). Scope of supply: drying time tool with 8 needles / weights, allen key, 2 glass plates

AB3075 - Grindometer tool for TQC Automatic Film Applicator. Device allows the user to clamp a TQC grindometer scraper onto the TQC Automatic Film Applicator, to define the fineness of grind accurately and reproducibly. This article ONLY contains the tool

TECHNICAL SPECIFICATIONS

Automatic Film Applicator

Traverse speed:	2 – 500 mm/s ; 0.08-19.7 inch/s
Traverse speed accuracy:	+/- 1% of set speed
Stroke length:	50 – 359 mm; 2-14.1 inch
Stroke length accuracy:	+/- 2 mm; +/- 0.08 inch
Max test chart size:	DIN A3
Max test substrate thickness:	35mm including applied coating
Max. width alternative film applicators:	max. 300 mm
Max. test panel size (only glass bed models)	460 x 300 x 9 mm; 17.7x11.8x0.35 inch (LxWxH)
Max. height alternative film applicators:	max. 80 mm

Wire bar length:	max. 325 mm spiral area in 364 mm/ 14.33 inch length at fixation points.
Wire bar diameter:	max. Ø10 mm/ 0.39 inch at the fixation points.
Drawn down speeds:	12 steps selectable from 2 - 500 mm/s. and free selectable (custom)
Drawn down lengths:	A5 / A4 / A3 and free selectable (custom with variable starting/stopping point) , except for the heated vacuum bed which only operates with A3. If smaller test charts are used you have to create a A3 sized paper frame to protect the holes from paint walk.
Max vacuüm:	-178 mbar
Diameter vacuum holes	1,4 mm / 0.06 inch
Distance between vacuum holes	19 mm / 0.75 inch horizontal, 20 mm / 0.79 inch vertical
Number of vacuum holes	14 (h) x 18 (v) = 252
D x W X H	650 x 350 x 240 mm /25.59x13.78x9.45 inch
Net weight:	app. 36 kg / 79.37 lbs dependent on model
Power supply:	115 – 230 V, 50 - 60 Hz
Power consumption:	max. 80 Watt
Display:	Blue Illuminated, graphic 100 x 35 mm, / 3.94x1.38 inch 193x64 pixels
Menu languages :	English, German, Spanish, French, Italian
Safety:	Emergency button and intelligent proximity switches, integrated acoustic alarm
Function:	Jog shuttle knob by rotation / pushing

Heated perforated vacuum bed

Minimum temperature:	Ambient + 5°C / 9°F
Maximum temperature:	Ambient + 100°C / 180°F (Absolute max 140°C / 284°F)
Resolution of set temperature:	1°C
Resolution of readout temperature:	0.1°C
Temperature controller:	Separate
Power consumption heating:	450 Watt
Power Supply:	230V, 50Hz
Drawn down lengths:	A3. If smaller test charts are used you have to create a A3 sized paper frame to protect the holes from paint walk.

Drying Time Recorder

Drying time range:	1 min. – 2880 min (48 hours).
Time accuracy:	≤ 1% of set time.
Maximum test length:	350mm / 13,78 inch
Maximum number of tracks:	8
Force per needle:	3,5g / 0,03N
Weight separate weights	5g / 0.18 oz piece
Ø needle	2 mm / 0.08 inch
Material	aluminium, stainless steel
Dimensions	50x60x 315 mm / 1.97x2.36x315x12.4 inch
Weight	280g / 9.88 oz

SPECIAL CARE

- 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.

SAFETY PRECAUTIONS

- Not suitable to be put in the sun or in the high light
- Avoid using it in over-high or over-low temperature environment
- Avoid humidity
- Always make sure the instrument is connected to an earthed electric socket.
- Always make sure the instrument's power is turned off while adjusting any electric component

DISCLAIMER

The right of technical modifications is reserved.

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