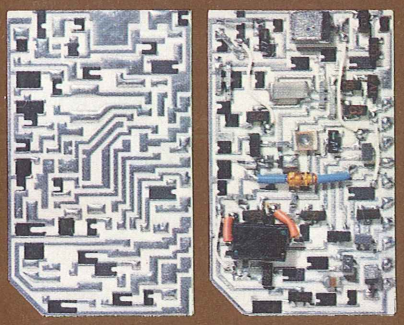
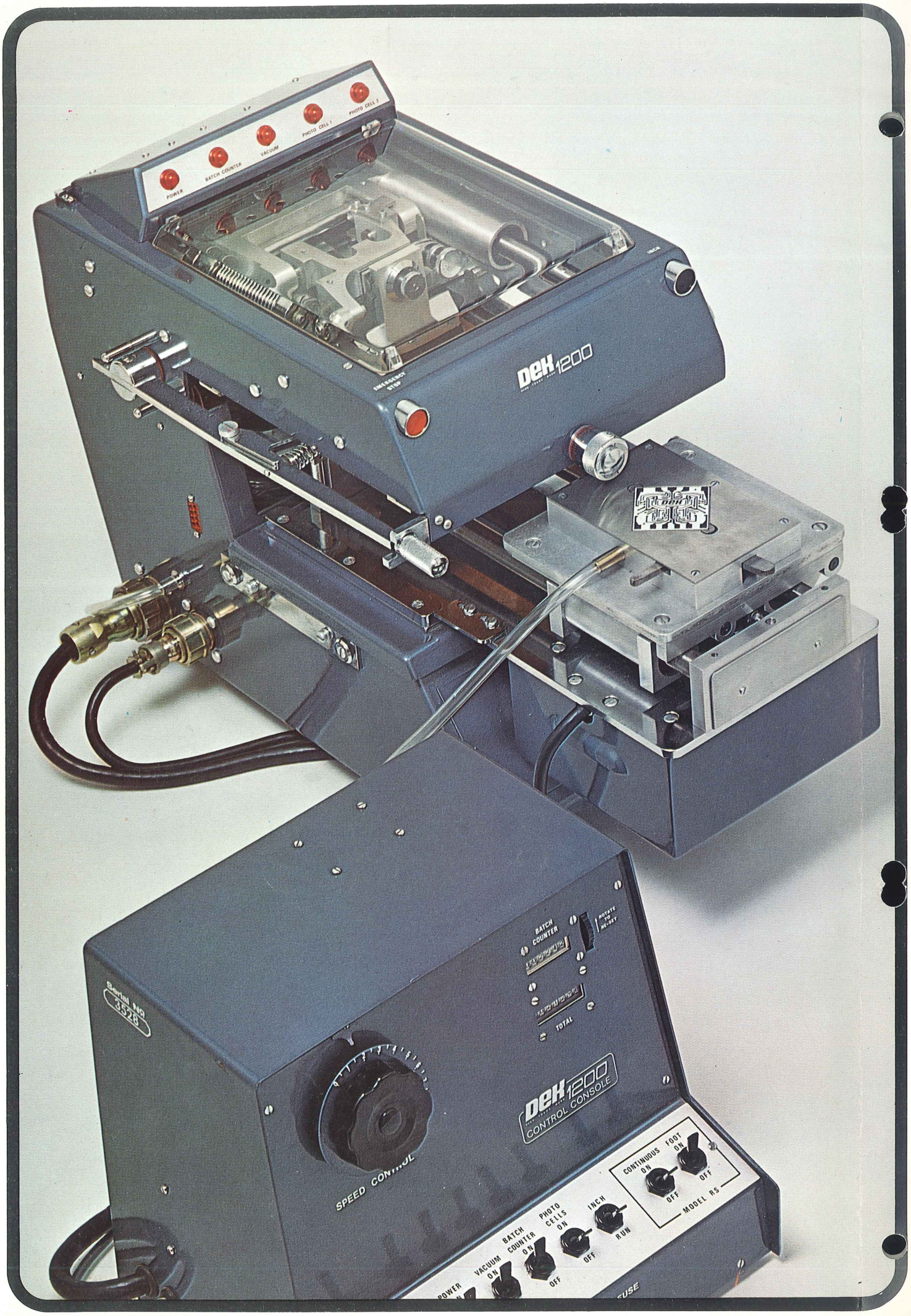
16.920,-
4.940,-



DEK 1200

THICK FILM PRINTER


POWER
BATCH COUNTER
VACUUM
PHOTO CELL 1
PHOTO CELL 2
dek 1200
Serial NO
3528
BATCH COUNTER
ROTATE TO RE-SET
TOTAL
dek 1200
CONTROL CONSOLE
SPEED CONTROL
CONTINUOUS ON OFF
FOOT ON OFF
MODEL RS
POWER
VACUUM ON
BATCH COUNTER ON
PHOTO CELLS ON OFF
INCH RUN

DEK1200
PRECISION SCREEN PRINTER

First choice in the world of microelectronics

Designed specifically to meet the demands of metal compound and resist deposition in thick film and related applications, the DEK1200 has proved itself throughout the world. DEK engineers and process workers combined the experience of 20 years in industrial screen printing when they created the DEK1200. This was a no compromise exercise in giving the sophisticated microelectronics industry exactly the tool it required. The result was an unbeatable combination – the high yields of custom-built precision equipment with the versatility, ease of operation and economics of a standard production machine.

First choice throughout the world

Some of the international leaders in microelectronics who have chosen the DEK1200 –

Europe
- GEC
- ITT
- Lucas
- Philips
- Pye Dynamics
- Siemens
- Telefunken
- Welwyn

USA
- General Dynamics
- Lockhead
- Motorola
- Texas Instruments

Japan
- Cannon
- Mitsubishi
- Toyota

DEK1200 is also used by PTT engineering authorities in India, Italy, Germany, Spain and the UK, as well as by other government establishments in many countries and by such educational institutions as Loughborough University, Pretoria College and the University of Queensland.

DEK1200 The basic concept

The DEK1200 is designed to ensure that results obtained on laboratory quantities are exactly repeatable in a variety of production situations. This is achieved by electrical drive of the print head, producing constant speed and contact with every stroke. With single-shot, semi- or fully-automatic systems, only the feed rate varies – print speed remains the same, ensuring laboratory precision under the most pressing production conditions.

The DEK1200 provides a generous maximum print area of 10cm x 10cm (4in x 4in). The machine is operated from a separate console, as are any feed systems which might be used, and needs only a single phase electrical supply.

Alternative DEK feed systems include the RS (Reciprocating Slide) System and the FAC System (which is described opposite).

The RS System allows for a manual load/unload sequence with production rates of up to 600 substrates an hour. The system consists of a reciprocating table and slide which can accommodate a holder for any size of substrate. Holders are supplied by DEK to customer requirements, with provision for both mechanical and vacuum holding of the substrate during the print cycle, and with a lever operated raising device to ease removal of the substrate.

The control console contains all the electrical controls, including the variable speed control and the integrally mounted vacuum pump and motor, the progressive and batch counters and all systems switches. A photocell system is also incorporated for use with fully automatic feed systems.

The DEK1200 is designed throughout to provide the close tolerance fine line definition required by the electronics industry, and is of completely British design and manufacture.

First choice for sound reasons

The DEK1200 offers this unique combination of standard features –

☐ Electrical drive – providing repeatable print strokes for constant deposition.

☐ Choice of feed systems without major adjustments.

☐ Calibrated adjustment of all print functions.

☐ Positive location of screen – replacement after clean down without resetting.

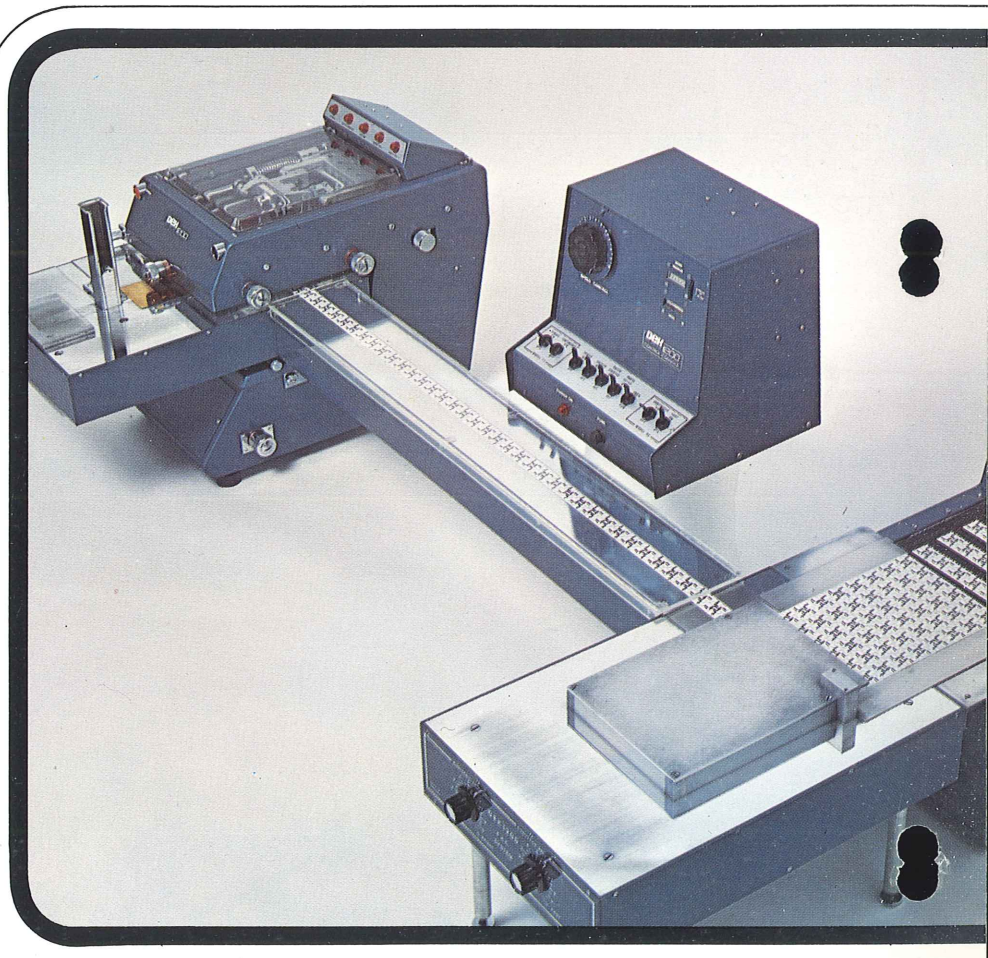
☐ Vacuum *and* mechanical location of substrates.

☐ Indexing facility simplifies initial squeegee settings.

☐ Wear-free sealed bearings need no lubrication.

☐ Safe, clean enclosed operation.

☐ Friction drive clutch on RS system eliminates jarring and provides additional operator safety.



The FAC System

This fully automatic feed system enables sustrates to be fed from a magazine – or to be fed manually when co-firing – so that they pass through the print station, without risk of smudging, to a colocator. This groups the substrates, which are then pushed to either a furnace or drying belt.

The FAC system can also be adapted to fill trays or cassettes.

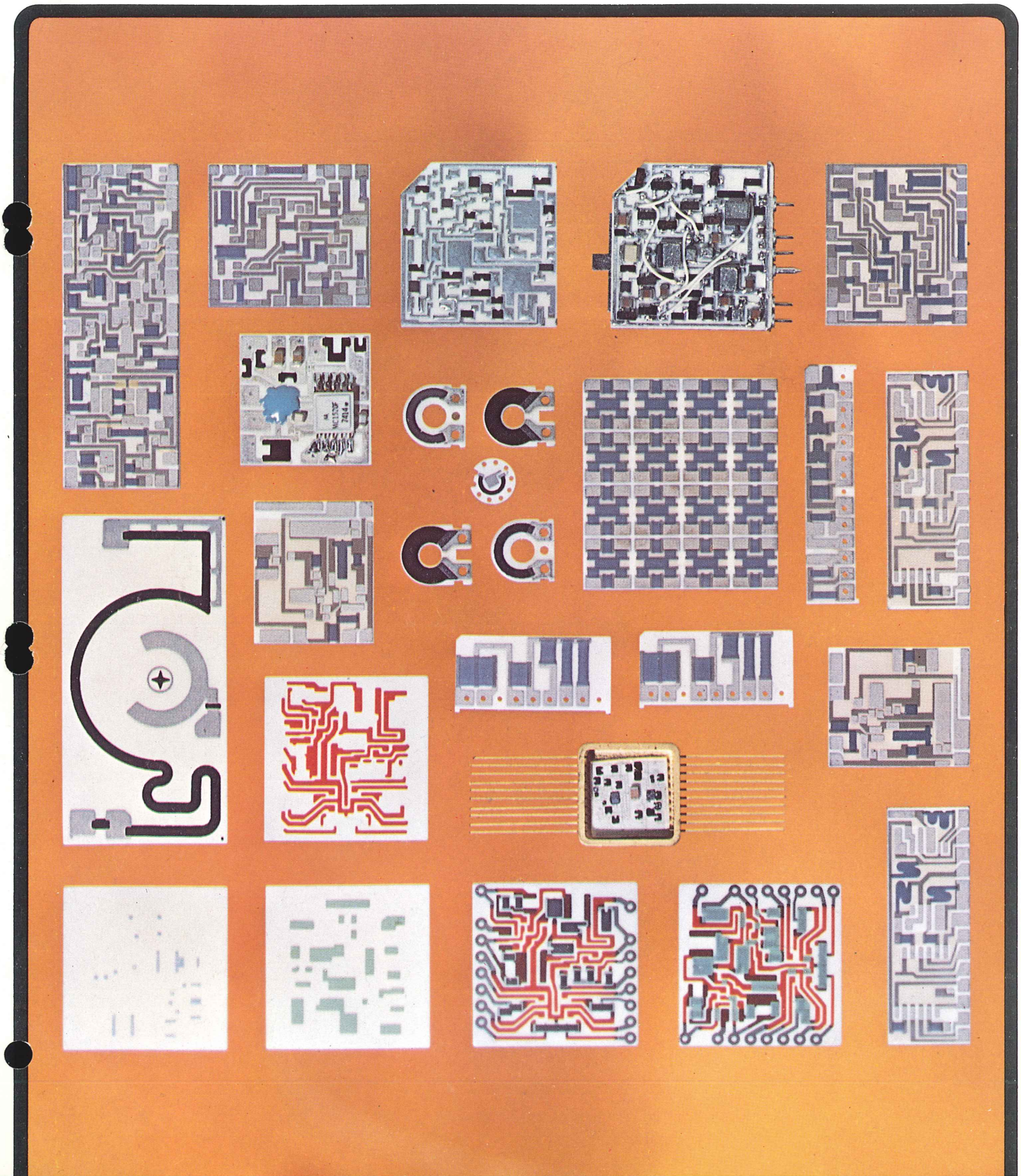
Each system is manufactured to accommodate specific customer requirements and to interface with existing or proposed flowline methods.

At all times, substrates are held by vacuum, or moved mechanically. With this system the output rate is up to 1800 substrates an hour, depending upon substrate size.

DEK 1200

First choice in the world of microelectronics

Thick film deposition on alumina substrates. Other applications include resisting of Liquid Crystal Displays and Light Emitting Diode Displays; deposition of solder and epoxy pastes; miniature PCBs and silicon wafers for power devices.



Specification

Description

DEK1200 precision screen process printing machine with fully automatic, single cycle and inching facilities. Electric motor drive with output speed infinitely variable by one calibrated control. Designed specifically for use in close tolerance and fine line reproduction, as required in the electronics industry. British design and manufacture.

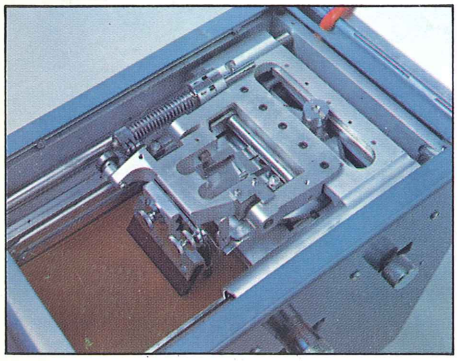
Construction

Main machine unit. A specially treated mild steel casing houses the drive motor and print head. All bearings associated with moving parts are lubricated and sealed for life during manufacture. A moulded perspex cover above the squeegee mechanism and screen prevents contamination and slows ink solvent evaporation.

Console unit. The separate control console contains all the electrical controls, including the variable transformer speed control, vacuum pump and fractional horsepower motor (240V, 50Hz, single phase), progressive and batch counters and all system switches. Photocell safety cutout circuits can be fitted as an optional extra.

Squeegee mechanism

The complete squeegee assembly is mounted within linear bearings running on precision ground bars. Movement is provided by a directly coupled electric motor through a reduction gearbox. Synchronisation of rise and fall of squeegee and ink distributor is by cam action. The contact pressure is adjustable by calibrated control from 0.5kg to 5.5kg (1lb to 12lb) linear.



The lateral angle and height are adjustable, while the vertical angle is fixed at 60°. Length of print stroke is fully adjustable over the range 25mm to 105mm (1in to 4¼in).

Ink distributor

On the return stroke, after printing, the ink is distributed in a thin even layer to provide a supply and also to prevent drying in the open areas of the mesh. The distributor consists of a concave blade which rises and falls alternately with the squeegee. The contact pressure is adjustable.

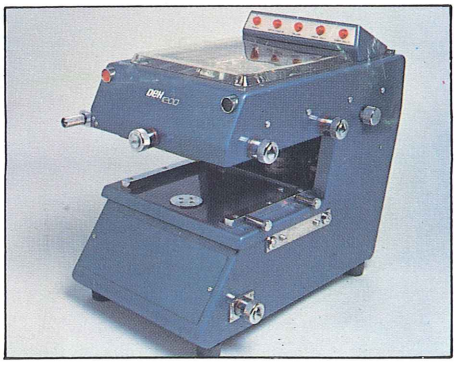
Printing gap

The distance between substrate and the underside of the screen is adjustable by calibrated control up to 6mm (¼in). The table is supported on four roller bearings which rise and fall in unison.

Screen carrier and registration frame

This consists of a fabricated true plane frame to which the screen frame is attached. For registration of print image to substrate, three ground and hardened pads face ball point contacts in the print frame to provide universal movement of the screen.

The composite frame is held in position against the registration points by two quick-release spring loaded roller contacts. This allows the screen to be removed for cleaning after registration, and to be replaced without repositioning.



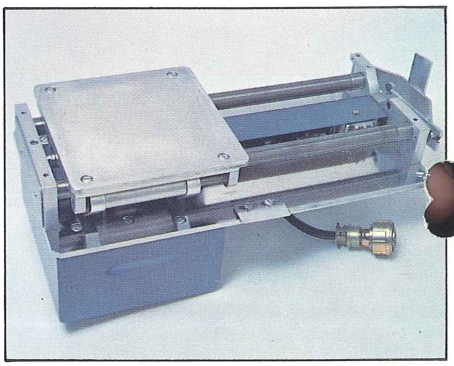
The three registration controls are calibrated, with positive movement in either direction, and are placed on the same side of the machine as the calibrated control which adjusts the gap between the substrate and the underside of the screen.

Output speed

Controlled by a continuously variable transformer to a maximum cycle speed of 2200 per hour (900 per hour with the RS feed system). Provision for fully automatic operation, single cycle or inching for setting purposes.

Feed systems

RS System. Provides semi-automatic operation with manual load/unload. Operation is by foot switch. The carrier and independently mounted table are on linear tracks.



The drive incorporates a slipping clutch, an important operator safety feature.

FAC System. Fully automatic system feeding from magazine, cassette or tray and, after printing, to a colocation unit for discharge to furnace or drying belt. The colocation unit collects and positions substrates so that they continue to subsequent process stages in consistent rank and file patterns.

Dimensions

Basic machine

Length	510mm	(20in)
Height	430mm	(17in)
Width	340mm	(13½in)
Weight	60kg	(133lb)

Control console

Length	265mm	(10½
Height	290mm	(11½in)
Width	340mm	(13½in)
Weight	15kg	(33lb)

RS feed system

Length	440mm	(17½in)
Height	170mm	(6½in)
Width	220mm	(8½in)
Weight	14kg	(30lb)

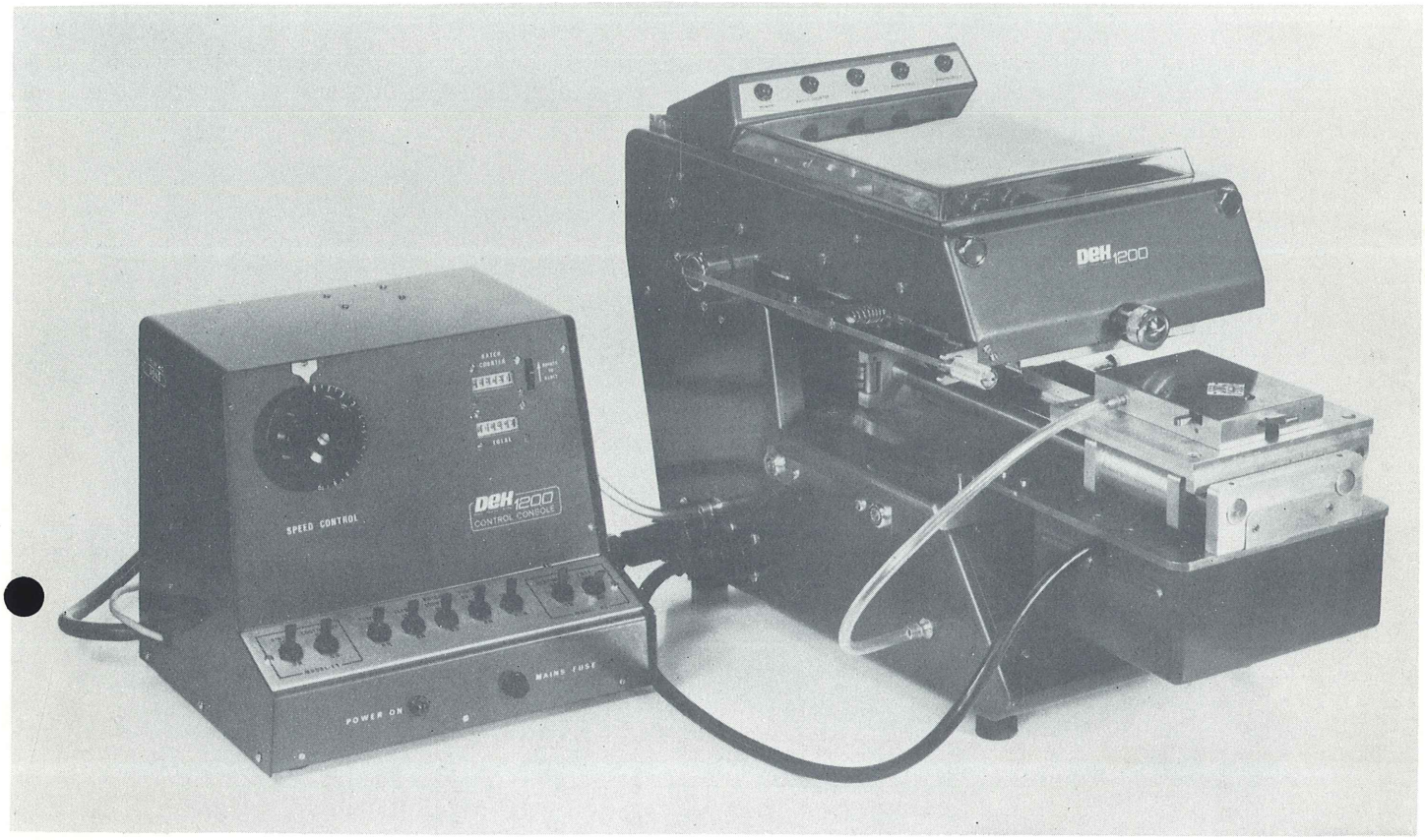
Shipping weight and dimensions

Crate containing three units, tool kit and packing.

Length	1250mm	(49in)
Height	430mm	(17in)
Width	530mm	(21in)
Weight	110kg	(243lb)

DEK Printing Machines Limited
1 Euston Centre, London NW1 3JG, England. Telephone: 01-387 0215. Telex: 261445. Cables: Dekprint London.

DEK 1200 Thick Film Printer



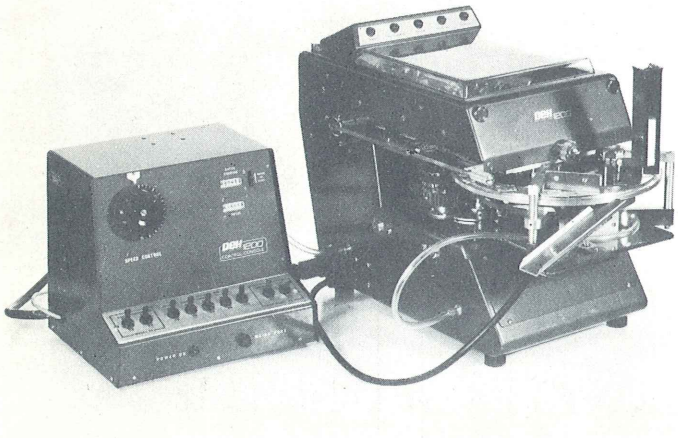
Model 1200 Printer with RS feed system and control console

The Model 1200 has been produced specifically for the deposition of metalized compounds and resists used in the electronics industry for thick and thin film circuits.

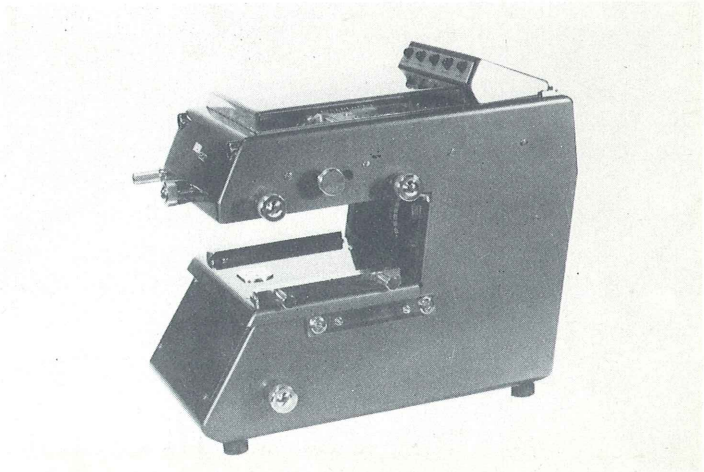
The printer was designed by engineers and process technicians with over twenty years' experience in satisfying the demands of industry for screen printing machinery.

The basic machine is operated from a separate console, as are the alternative feed systems which are completely self-contained and require only a single phase electric supply.

The Model 1200 is rigidly constructed to give years of service, and maintenance has been kept to a minimum by the use of sealed-for-life bearings.



TT feed system fitted to Model 1200



Basic printer showing registration controls

DEK
Printing Machines Limited
Granby Industrial Estate
Weymouth
Dorset
England

Telephone: Weymouth 2193
Telex 41122
Telegrams
Dekprint Weymouth

Screen Printing
Machinery for exacting
and high quality
Industrial applications

DEK 1200 Thick Film Printer

Description
DEK Model 1200 Precision Screen Process Printing Machine, with fully automatic, single cycle and inching facilities. Electric motor drive with output speed infinitely variable by one calibrated control. Designed specifically for use in close tolerance and fine line definition required in the electronic industry. All parts are of British design and manufacture.

Construction
Main Machine Unit. A specially treated mild steel casing houses the drive motor and print head. All bearings associated with moving parts are lubricated and sealed for life during manufacture. A moulded perspex cover above the squeegee mechanism and screen prevents contamination and slows ink solvent evaporation.
Console Unit. The separate control console contains all the electric controls, including the variable transformer speed control, vacuum pump and motor (fractional horsepower, 240V 50Hz, single phase), progressive and batch counters and all system switches. Photocell safety cut-out circuits can be fitted as an optional extra.

Squeegee Mechanism
The complete squeegee assembly is mounted within linear bearings running on precision ground bars. Movement is provided by a directly coupled electric motor through a reduction gearbox. Synchronisation of rise and fall of squeegee and ink distributor is by cam action. The contact pressure is adjustable by calibrated control from 0.5-5.5 kg (1-12 lbs) linear. The lateral angle and height are adjustable, while the vertical angle is fixed at 60°. Length of print stroke is fully adjustable over the range 25mm-105mm (1″-4¼″).

Ink Distributor
On the return stroke (after printing), the ink is distributed in a thin even layer to provide a supply and also to prevent drying in the open areas of the mesh. The distributor consists of a concave blade which rises and falls alternately with the squeegee. The contact pressure is adjustable.

Printing Gap
The distance between substrate and underside of screen is adjustable by calibrated control up to 6mm (¼″). The table is supported on four roller bearings which rise and fall in unison.

Screen Carrier and Registration Frame
This consists of a fabricated true plane frame to which the screen frame is attached. For registration of print image to substrate, three ground and hardened pads face ball point contacts in the print head to provide universal movement of the screen. The composite frame is held in position against the registration points by two quick-release spring loaded roller contacts. This allows the screen to be removed for cleaning after registration, and to be replaced without re-positioning. The three registration controls are calibrated, with positive movement in either direction.

Output Speed
Controlled by a continuously variable transformer to a maximum of 1,800 per hour (900 per hour with RS feed system). Provision for fully automatic operation, single cycle or inching for setting purposes.

Feed Systems
RS For manual load/unload. A reciprocating table and slide to which can be fitted a holder for any size of substrate.
TT Fully automatic magazine-fed rotary indexing table for certain sizes and shapes of substrate.
DRS A double table and slide working on a 'shuttle-action' which permits unload/load of one station while the other is printing.

Print Area
Maximum area 90mm x 90mm (3½″ x 3½″). The image should be located centrally.

Dimensions

Basic Machine

Length	510mm	(20″)
Height	430mm	(17″)
Width	340mm	(13½″)
Weight	60kg	(133lbs)

Control Console

Length	265mm	(10½″)
Height	290mm	(11½″)
Width	340mm	(13½″)
Weight	15kg	(33lbs)

RS Feed System

Length	440mm	(17½″)
Height	170mm	(6½″)
Width	220mm	(8½″)
Weight	14kg	(30lbs)

Shipping weight and dimensions

Crate containing three units, tool kit and packing

Weight	110kg	(243lbs)
Dimensions	1250mm x 430mm x 530mm (49″ x 17″ x 21″)	

Agent

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Dorset
England

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Screen Printing
Machinery for exacting
and high quality
Industrial applications

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