

SUPERIOR ELECTRIC NEDERLAND N.V.

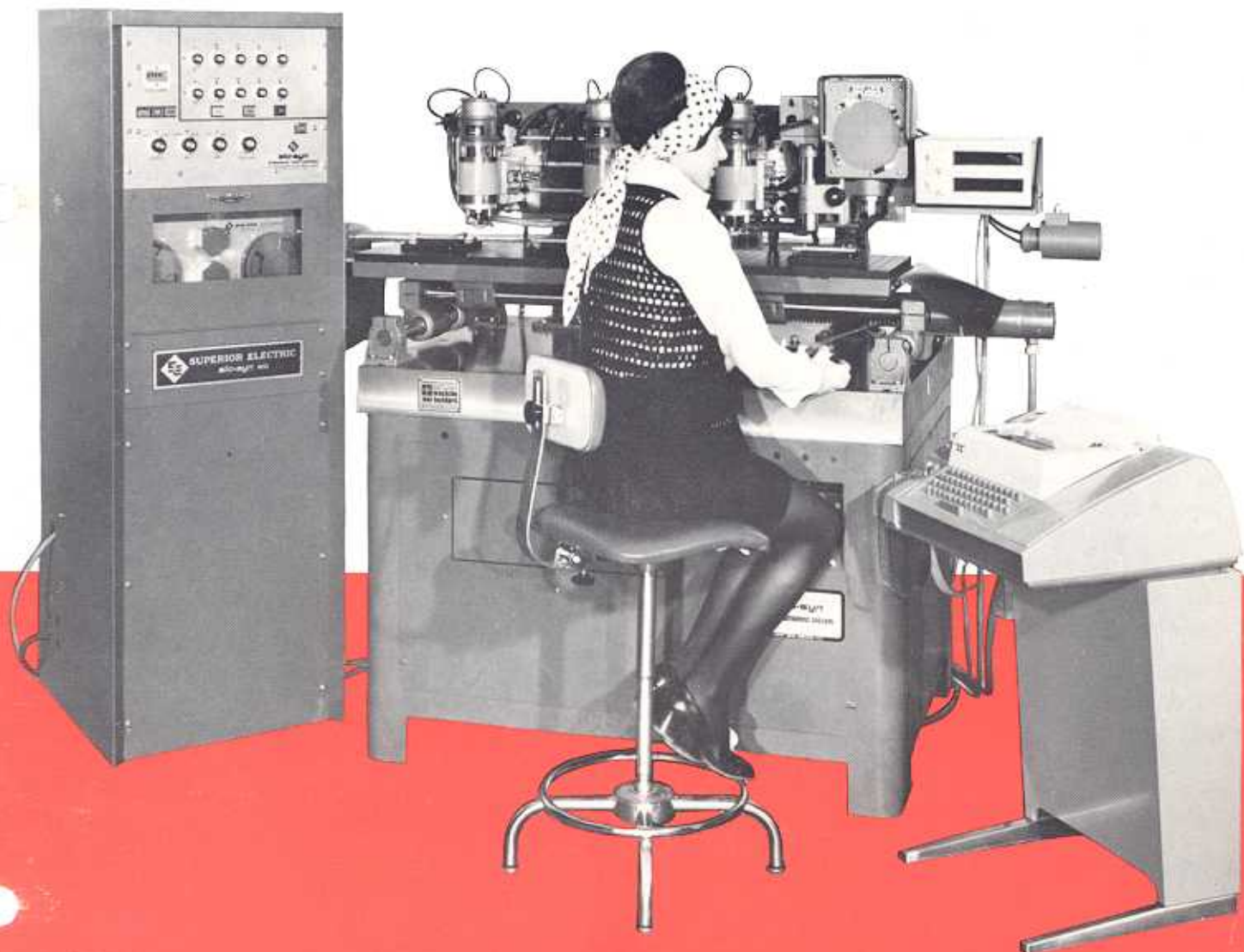
slo-syn

N/C DIGITIZING/DRILLING MACHINE

Type SNC400DIGX

- Precise digitizing of undimensioned artwork
- Can drill while digitizing
- Automatic centering in grid mode
- Abbreviated tape format for fast output
- Visual display of position program
- Hard-copy program printout
- Drilling rate to 80 cycles per minute
- Manual data input for positioning

By combining digitizing and numerically controlled drilling functions in one versatile package, the SLO-SYN N/C Digitizing/Drilling Machine permits profitable operation with a wide range of lot sizes and configurations of printed circuit boards. Boards with undimensioned artwork or those which have errors caused by distortion in the screening process can now be accurately drilled at high production rates. Improved accuracy, minimized inspection and reduced lead time lower cost significantly.



ALL PRODUCTS ARE MANUFACTURED IN THE UNITED STATES BY THE SUPERIOR ELECTRIC COMPANY, BRISTOL, CONNECTICUT

Superior Electric Nederland N.V.
Koperwerf 33
The Hague, Netherlands
Telephone: (070)679590
Telex: 31436 Super nl
Cable: SUPELEC

Superior Electric Engineering
Services N.V.
Aylmer House
Linkway the High
Harlow, Essex, England
Telephone: Harlow 20971

Superior Electric GmbH
Landsbergerstrasse 495
8 Munich 60 Germany
Telephone: 882576

Superior Electric GmbH
Hohenstrasse 74
Dusseldorf, Germany
Telephone: 724825

Superior Electric Zurich A.G.
Postfach 183
8026 Zurich, Switzerland
Telephone: (051)275694

SLO-SYN® N/C DIGITIZING/DRILLING MACHINE



X-Y Digital Readout



Positioning Control Box

COMPONENTS: The complete package is made up of a SLO-SYN Numerical Control, a multi-station drilling machine, magnifying viewer, positioning control box, tape punching teletypewriter and an x-y digital positioning readout. Three Precise drilling heads equipped with centrifugal chucks allow rapid changing of $\frac{1}{8}$ " (3.2mm) tapered shank drills without requiring keys or other tools. Spindle speed is adjustable up to 45,000 rpm and the drilling rate can be varied up to 80 cycles per minute. Each head is provided with a combination dust collector and pressure foot. The table is driven by precision ball-nut lead screws up to 100 inches per minute (2.5 meters per minute).

OPERATION: Any printed circuit board having dimensions within the table travel limits can be set up for digitizing and drilling. A board or film sample is placed in the digitizer fixture. For small lots, boards can be placed in the fixture beneath the drilling heads so that production drilling can take place while digitizing.

It is immaterial whether the board artwork is gridded or undimensioned or whether the artwork is distorted because of faulty screening. Drill targets are centered on the viewer crosshairs by operation of the positioning control box. Actuation of the digitizing button feeds the position information to the punched tape typewriter. If there are repetitive sub-routines, they can be punched once and read into any part of the program by the teletypewriter tape reader.

Three positioning speeds may be selected: 1 inch (25mm), 10 inches (254mm) or 100 inches (2540mm) per minute. The gridding feature permits use of the

higher speeds. Lower speeds are desirable for centering of undimensioned targets. The viewer is available with a magnification of any power from 5X to 50X.

This versatile package permits preparation of taped programs for any 2-axis SLO-SYN N/C Positioning System. It can also be used to verify the accuracy of programs that have been prepared for these systems. Tape programs can also be prepared for rapid N/C inspection applications.

SPECIFICATIONS	
Table Size	13" (33cm) x 50" (127cm)
Table Travel	12" (30cm) x 12" (30cm)
Positioning Rate	Over 100 positioning cycles per minute
Positioning Resolution	.001" (.025mm)
Accuracy	$\pm .001$ " (.025mm)
Repeatability	within .0005" (.013mm)
Spindle Speed	Variable up to 45,000 rpm
Power Requirements	N/C unit and digitizer package: 200 to 240 volts, 50 \pm 5% hertz Drilling heads: 120 volts, 25-60 hertz Air Pressure: 60-80psi (4-6 kg. per sq. cm.) Recirculating ball-nut with no backlash
Lead Screws	
Drill Capacity	Accepts drills with $\frac{1}{8}$ " (3.2mm) diameter shanks

DIGITIZING KITS

Digitizing kits are available to enable previously purchased SLO-SYN N/C operated equipment to make punched paper tapes from artwork, patterns and other physical references. The kits come ready for installation and include: a magnifying viewer, positioning control box, x-y digital positioning readout, tape punching teletypewriter and associated electronics. Complete information is available on request.

The right to make engineering refinements on all products is reserved. Dimensions and other details are subject to change. When dimensions are critical, detailed drawings should be obtained from the factory.



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NEDERLAND N.Y.**

Koperwerf 33

The Hague, Netherlands

Tel: (070) 679590 Telex: 31436 Super nl

Cable Address: SUPELEC

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