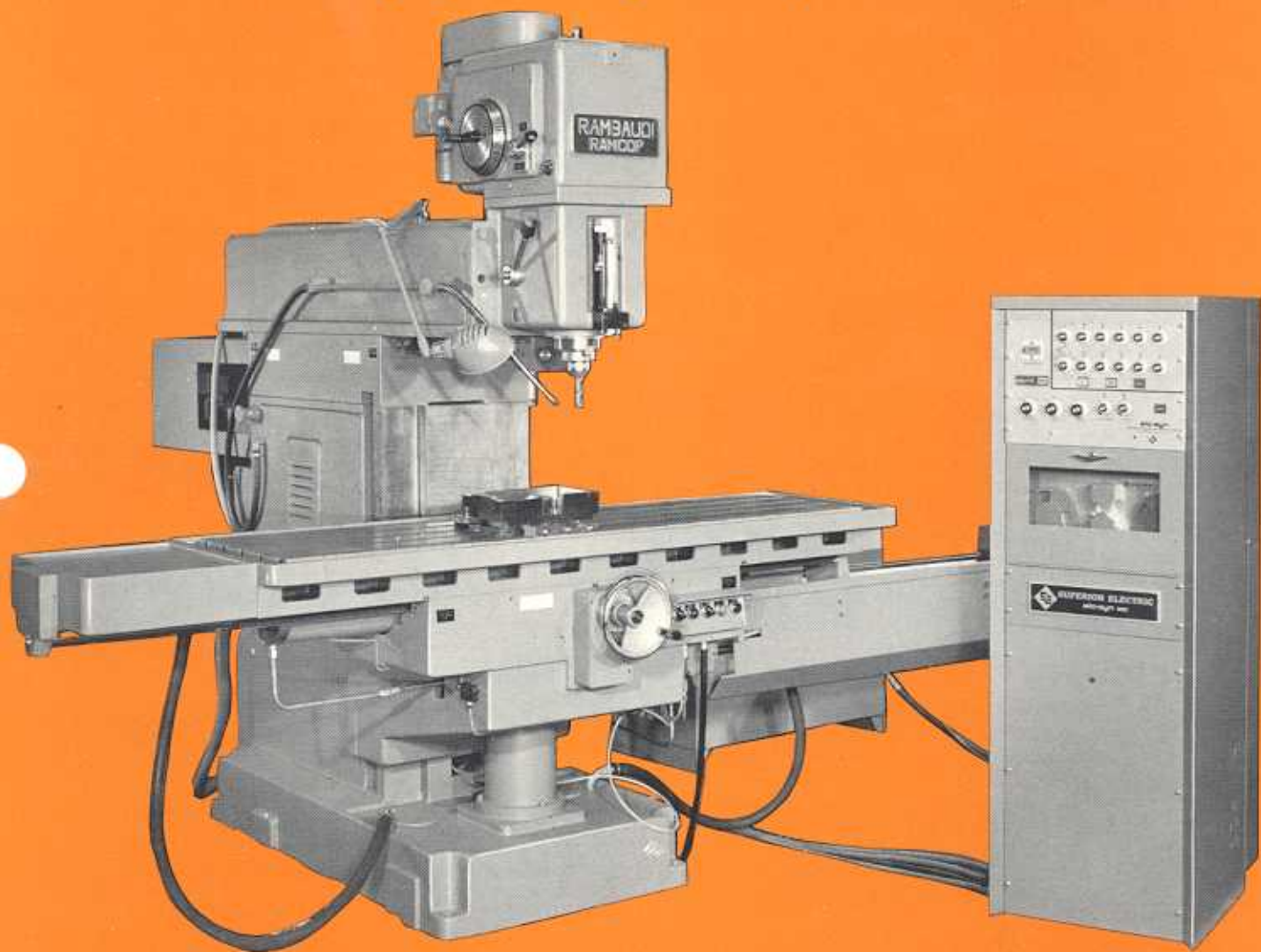


# SUPERIOR ELECTRIC

SLO-SYN®

## HYDRAULIC LINEAR ACTUATOR

*for retrofitting Hydraulic Cylinder Operated Tracer Mills*



- Contouring N/C controls existing hydraulic cylinders
- Eliminates need for tracing head and patterns
- Two- or three-axis models available
- Continuous path control — no tool dwell
- Infinitely adjustable feed rate
- 60 ipm rapid traverse
- Linear and circular interpolation for programming simplicity
- Manual data input plus jog control
- System accuracy:  $\pm .002''$
- System repeatability: within  $.002''$





# SLO-SYN® HYDRAULIC LINEAR ACTUATOR

the next in a straight line when operating in the LO feed range. Therefore, any angle can be produced by programming the x and y axis increments to the next point.

## CIRCULAR INTERPOLATION

Programming of circular cuts in any one quadrant can be done in a single data block by describing the x and y axis increments and the location of the center of the arc. As a result, tape program length is reduced and the need for time consuming calculations is eliminated.

## MANUAL DATA INPUT

Positioning and jogging can be controlled from the front panel when necessary. Manual data input allows the operator to set up the equipment as well as position without tape. Linear interpolation is in effect when positioning from the manual input controls in the LO feed rate setting.

## TABLE FEEDS

The SLO-SYN Continuous Path Contouring Control has a low feed range that is infinitely adjustable within a 0 to 20 ipm range. A second, low feed control can be adjusted within the same range and is selected from tape. The rapid traverse rate is adjustable within a 90 to 180 ipm range. Feed rate can be switched from low to high from tape for a rapid traverse.

The SLO-SYN Hydraulic Linear Actuator converts a hydraulic cylinder operated tracer mill into an N/C contouring mill. It consists of a SLO-SYN Continuous Path Contouring Control plus motors and hydraulic valves for each axis. The valves control hydraulic flow to the existing hydraulic cylinders and are controlled by the N/C through pilot lead screws. The pilot lead screws are not supplied. The resulting control system adds the flexibility of contouring tape control while retaining the smooth power flow and high torque capability of the original hydraulic system. Complex parts can be produced quickly with greater accuracy than is possible with a tracer mill and the need for a tracer head and templates is eliminated.

## N/C FEATURES

The SLO-SYN Continuous Path Contouring Control which directs the hydraulic linear actuator is a proved design and incorporates a number of operating features which make it an outstanding N/C value. For example, the control can be changed from EIA codes to ASCII codes by relocating a circuit board in the logic chassis. The control has digital, plug-in circuits for ease of servicing and has a photoelectric tape reader that is fully enclosed for protection from dust and metal chips.

## LINEAR INTERPOLATION

The control automatically adjusts the positioning commands so that the table will travel from one position to

## SPECIFICATIONS

### SLO-SYN® HYDRAULIC LINEAR ACTUATOR

Power Input	105 to 130 volts, 50/60 hertz
Positioning Resolution	.001"
Positioning Accuracy	±.002"†
Positioning Repeatability	within .002"†
Max. Table Travel per Command	99.999"
Max. Radius of Programmed Arc	100"
Max. Contouring Feed Rate	20" per minute
Contouring Accuracy	±.002"†
Tape	one inch wide, 8-channel binary coded decimal
Tape Reader Speed	60 characters per second
Auxiliary Functions	five
Auxiliary Function Control	by relays, external contacts rated 1.0 amp., 120 volts resistive
Console Dimensions (approximate)	22½" wide, 65" high, 29½" deep

†Depending on condition of machine.

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.



THE  
**SUPERIOR ELECTRIC**  
COMPANY  
Bristol, Connecticut 06010