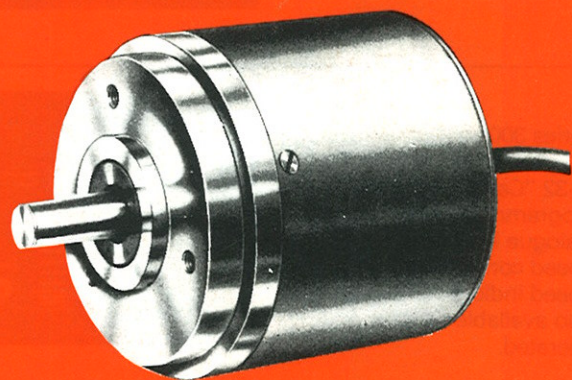
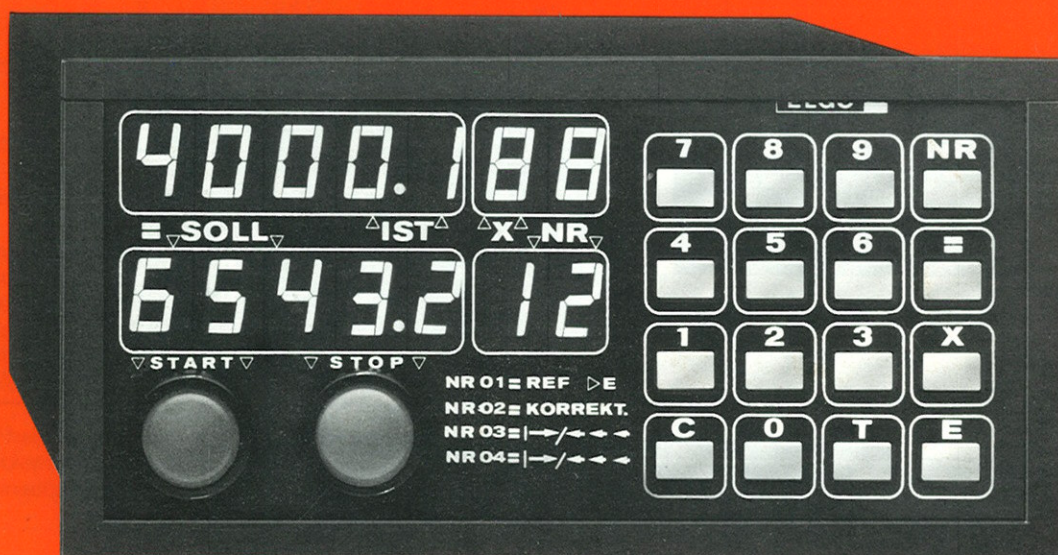


FULLY AUTOMATIC POSITIONING

Single axis programmable controller

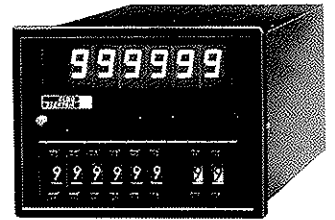
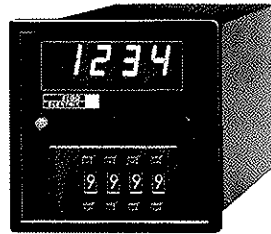
15 Address Memory using keyboard
Distance correction inputs
Automatic Backlash compensation

TYPE 75 P
TYPE 75 K

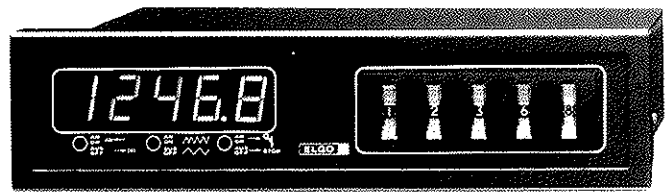
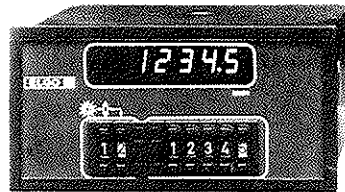


A SUMMARY OF OUR PRODUCT RANGE

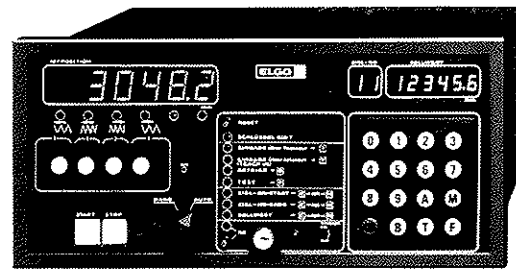
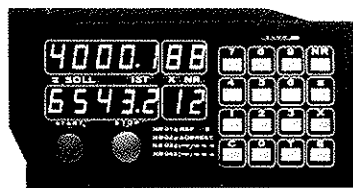
Series 30-60
Electronic Preset Counters.
Indicating Counters.
28 different standard types of
Position Indicators.



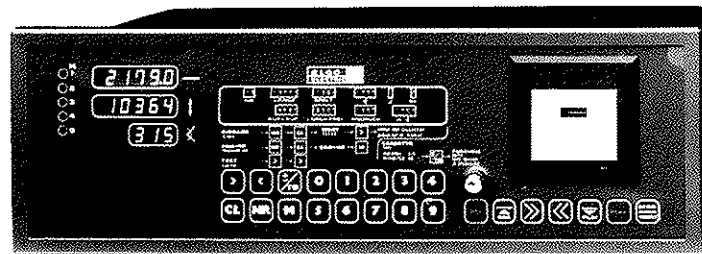
Series 70 P-80 P
Small, compact Single Axis
controllers,
fully automatic positioning
with integrated auxiliary
functions.



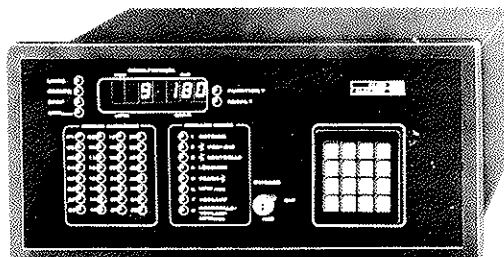
Series 75 P and 95 P
1 axis position controller
with Keyboard programming
memory for 30 to 60
positions.



Series 97.1 to 97.3
One - two and three axis
controller with cassette
storage and freely
programmable auxiliary
functions



Series 300
Fully electronic Camshaft,
8-32 "Cams" can be
programmed by means of
dialogue Keyboard.
Speed correction -
Speed indication -
also available timer
operated.



Accessories: Incremental and Absolute Encoders, Rack and Pinions, Couplings, Measuring Wheels, Mounting Flanges.

THE COMPLETE CATALOGUE AVAILABLE ON REQUEST



TECHNICAL DATA

Mains connection	220 V/50 Hz (other on request)
Power consumption	5 VA
Encoder power supply	12 V dc, 100 mA max
Reference and Actual distance readout	10 mm red LED
System accuracy	± 1 increment
Positioning speed	30 m/min max with 0.1 mm resolution
Self heating	28°C
Ambient temperature	-5° + 45°C
Connection	Plug in terminal block

Mechanical Data

Enclosure	Impact resistant black glass fibre polycarbonate
Front dimensions	H: 72 mm; W: 144 mm
Cut out	H: 67 mm; W: 139 mm
Mass	700 g
Mounting attitude	any.

Ordering Codes

Input of 13 Absolute dimensions; 2 incremental dimensions. Series 75 P
 Input of 13 Incremental dimensions; 2 absolute dimensions. Series 75 K
 Incremental operation without error compensation. Series 75.1
 Incremental operation with error compensation. Series 75.2

Short Description.

The 75 P and 75 K series are fully automatic positioning systems. 15 Reference points (lengths/Quantity) can be entered by means of a dust tight keyboard and then can be arrived at sequentially.

The equipment is housed in a simple easy to service plug-in enclosure and utilises the latest Microprocessor technology. The enclosure is suitable for both Bench top and Flush panel mounting. They are supplied with the following options: –

75 P

The principal application is for "Absolute positioning", – ie one can programme 13 absolute dimensions/quantities and 2 incremental dimensions. These can provide a combination programme.

75 K (1 or 2)

The principal application is for "Incremental positioning" – ie one can programme 13 incremental dimensions/quantities and 2 absolute dimensions. These can provide a combination programme.

Functional Features.

Datum of Equipment

The equipment is driven to a measured mechanical dimension. The known dimension is entered into Address 01. The equipment is then datumed. This action need be performed once only since the actual position of the equipment will be memorised on mains switch off.

Reference Input.

The reference data is entered by means of a dust proof keyboard with accoustic confirmation. (See point "Programming").

It is possible to enter 30 values, 15 into the permanent memory and 15 into transient memory. The values in permanent memory are retained on mains switch off, those in the transient memory are erased.

The choice as to whether the inputs are stored in the permanent or transient memory is made by an external key switch. (See connection diagram).

Creep Distance.

The Creep distance is dependent on the machine and can be pre-set at the back of the unit between 1 and 99 mm, by means of rotary coding switches.

The machine automatically starts in creep, when the difference between demanded position and actual position is equal to or less than the preset creep distance.

This must never be set to 00.

Overrun Correction on Stop.

The stop signal can be preset at the back of the unit by means of coding switches, between 0.1 and 9.9 mm. During commissioning, the value is first preset to 0.0 and a move executed. The overrun of demanded position will be seen in the Actual Position display and this value can be preset to give the stop signal that much before coincidence.

It is further recommended, that the stop signal is preset after ensuring that the mechanical system gives a constant value.

Example:

The required distance is constantly overrun by 0.3 mm. Set stop correction distance at the back of the unit to 0.3 mm.

Backlash Compensation.

To eliminate error due to backlash in screw/nut or pinion/rack, the system is arranged to ensure that the desired position is arrived at from one direction.

– In direction "greater", the position will be overrun (change over to creep speed takes place at the desired value). The "running" signal briefly drops out and reverse direction is selected. The drive now runs to the demanded position at creep speed. The overrun Time is preset internally by a variable resistor.

– This feature can be deleted if not required. This must be specified in order.

Sawblade width correction

The correction value (eg Sawblade thickness) can be entered in Address 02. This dimension will be automatically taken into account on all "Incremental" Addresses, ie the Back stop will move in the direction of the Sawline with this value added to each dimension.

The programmed dimension remains in the memory during Mains removal, if programmed into permanent memory.

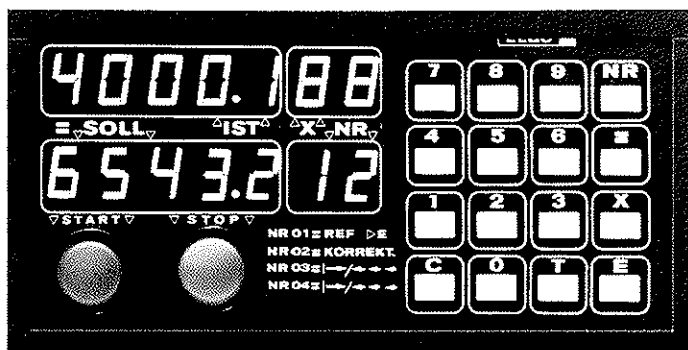
Actual Value Memory on Mains Switchoff.

As well as the Input Reference values, the Actual position will also be memorised on mains removal.

Memory on Switch off during position movement.

Should the movement require to be registered after mains switch off, the unit can be supplied with overrun security.

The Encoder and unit are in this case supplied for a further 3 seconds from an internal battery. This must be specified in order.



SWITCH ON CONDITIONS

The positioning system automatically assumes the first programme address on initial switch on. The first address (length and quantity) are displayed as the desired values.

PROGRAMMING.

The input is made by means of a simple formula: –

Position Nr. equals = length times (x) quantity

End (E) or next position Nr.

By means of the red indicator point on the right of the numbers, it is possible to see which is activated.

To start programming, always press Nr. twice. To abort programming, press 03 (Reset).

Press C (cancel) before entering new data.

Example of a simple programme (75 P)

It is required to have a single position (500.0 mm) and quantity 1. Press Nr. 1 = 500.0 x 1 E

On pressing the start button, the drive runs to the position 500.0, gives the quantity pulse and the programme is ended.

EXAMPLE OF A MORE COMPLEX PROGRAMME.

It is required to have 4 positions

Value 1 = 1000.0 mm, quantity 1

Value 2 = 5.0 mm, quantity 10

Value 3 = 25.0 mm, quantity 1

Value 4 = 200.0 mm, quantity 5.

Press: Nr. 1 = 10000 x 1

Nr. 2 = 50 x 10

Nr. 3 = 250 x 1

Nr. 4 = 2000 x 5

E = (End)

EXAMPLE OF A COMBINATION PROGRAMME.

It is required to have 3 Absolute dimensions and then an incremental feed programme.

Absolute value 1 = 1000.0 quantity 1

Absolute value 2 = 50.0 quantity 5

Absolute value 3 = 5000.0 quantity 3

Incremental value 4 = 20.5 quantity 90

Press: Nr. 1 = 10000 x 1

Nr. 2 = 500 x 5

Nr. 3 = 50000 x 3

Nr. 14 = 205 x 90

E (End)

NB

In the series 75 P, the addresses 14 and 15 are incremental dimensions.

In the series 75 K, the addresses 14 and 15 are absolute dimensions.

OPERATION WITH PROGRAMMED VALUES.

It is possible to operate on all 15 programmed dimensions or only the required addresses.

The position control systems 75 P and 75 K are designed such that a cycle need not follow a strict numerical address sequence ie 1-2-3-4-5 etc but any sequence that may be desired.

Example: The required sequence is to be values in Address 8,12 and 7.

Press: Nr. 8 = x

Nr. 12 = x

Nr. 7 = x

E (End)

On pressing the start button, the preset sequence of addresses will be followed.

DATUM.

The equipment is referenced to a mechanical datum eg 20.0 mm.

Press Nr. 01 200 E. E1 is displayed in address.

When the external datum switch (terminals 20 to 14), is closed, the reference value will appear in the actual value display.

SAWBLADE WIDTH CORRECTION.

Should it be necessary to provide compensation for Sawblade width, eg 2.5 mm.

Press: Nr. 02 2.5 E. E2 is displayed in address.

This value will automatically be added to incremental movements in the programme.

PROGRAMME TESTING USING PUSHBUTTON 'T'.

The pushbutton T has two functions.

1. The last entered programme can be viewed sequentially by pressing the button T.
2. With drive stationary (position reached) the programme can be moved on by means of the T button. This means that any address of the programme can be skipped.
3. With drive stationary (position reached), any address can be called up and its valve altered.

OPERATION/START PUSHBUTTON.

On pressing the start button the drive will run to the next desired value.

Once the desired value and quantity has been reached, the desired value display automatically switches to the next programmed address. The next start can be given by the same pushbutton or by means of an external signal. At the end of a programme the desired value display automatically goes to zero, and the programme can be restarted by pressing the start button twice.

On pressing the Stop button, the "run" signal from the drive opens, (motor stops).

START SIGNAL INHIBIT.

The start signal will be automatically inhibited on arrival at the end of the programme.

It is necessary to activate start twice (once to activate programme, once to start drive) to restart the cycle.*

* Only after program is finished.

OPERATION WITH TRANSIENT MEMORY.

The unit possesses 15 Transient programme addresses, which are erased on mains switch off.

Using this facility, it is possible to programme 15 values in the permanent memory and a further 15 values in the transient memory. The selection in which mode one operates is made by operation of an external key switch.

Contact between terminal 13 and 20 open: permanent programme.

Contact between terminal 13 and 20 closed:

Auxiliary programme.

Connections

Plug-in Terminal blocks

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Encoder Use screened cable, screen connected to zero	17	Backwards channel (B)	Encoder Term (4)
	18	Forwards channel (A)	Encoder Term (3)
	19	Supply +12V	Encoder Term (2)
	20	Zero 0V	Encoder Term (1)

Input Signals, Potential free closing contacts; use screened cable.

Start		Stores preset position distance and activates operating sequence.
Stop		Stops operating sequence. New position can be preset.
Reference value		With this contact closed (eg by external keyswitch), the preset value will be displayed in the readout.
Input for Permanent or Transient Memory		With this contact closed the input is not permanently stored. The values in the permanent memory however remain.
Automatic retract		With this contact closed, the Back Stop will move a defined distance back and forth again.

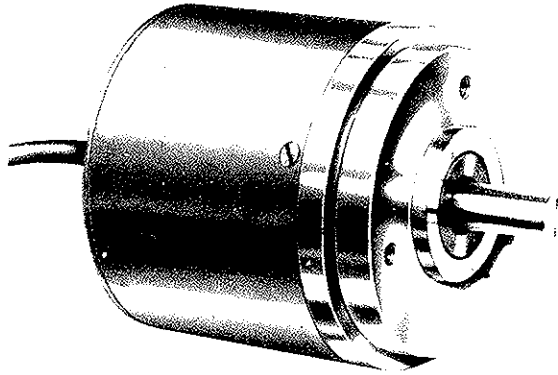
Output signals, Potential free, load 0.5 A 220 V (resistive)

Run		Enable contact for the Drive, closed when desired value is greater or smaller than Actual value. Opens when Stop preset point is reached, also momentarily during reversal for backlash compensation.
Slowdown		Closed when distance is greater than the slow running distance. Opens when slowdown point is reached.
Riverson		Closed when distance is less than Actual value.
Programm running		Closed, so long as the positioning is taking place. Opens when desired distance is achieved.

Power supply

1	Earth	
2	220 V/50 HZ* fused at 0.16 A internally	
3	N	* other voltages possible on request

DISTANCE MEASURING BY MEANS OF ENCODER 15.4000



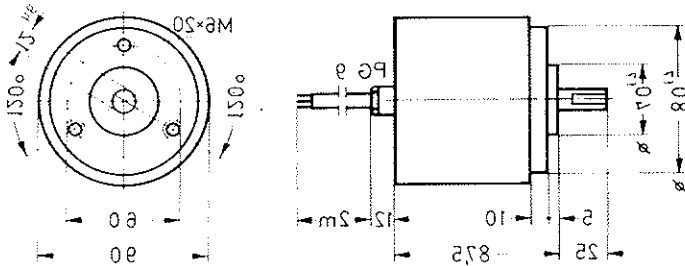
TECHNICAL DATA

Material: Anodised aluminium
 Shaft: Stainless steel
 Bearings: Sealed double ball bearing
 Enclosure: IP 55 standard
 IP 66 possible with extra sealing
 Speed: 6000 rpm max
 Frequency: 10 kHz.

CONNECTIONS

Terminal 1: 0v
 Terminal 2: 12v
 Terminal 3: Forward channel
 Terminal 4: Reserve channel

DIMENSIONS



ACCURACY

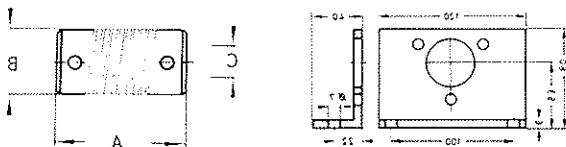
The accuracy of the positioning system is determined by the pitch of the lead screw (or rack) and the pulses per rev of the Encoder.

Example: Leadscrew pitch 10 mm
 Required accuracy ± 0.1 mm
 This give 100 pulses/rev.
 For the same screw, but with accuracy of 0.01 mm, then 1000 pulses per rev is required.

Order code: 15.4000.100 or 1000.

OPTIONAL EXTRAS

Mounting Flange type 19.9201
 Coupling type 19.9401



Shaft 12 mm
 C = 6-14 mm
 B = 26 mm
 A = 50 mm