

LogiKAR

Programmable Positioner Control for use in manual, semi-automatic or fully automated/robotic applications

The Koike Aronson/Ransome Programmable Positioner system is designed to increase productivity of manual welding applications as well as aid in the transition from manual to robotic welding applications. Built in I/O can accept and provide "In position" signals to any robotic control. There is no need to add an expensive robotic Positioner axis or replace existing motors and drives if LogiKAR control has been installed.

The control moves the work piece into a programmed position that is best suited for ergonomics or in position for a programmed robotic weld, speeding up sequential welding applications. It also includes a pendant for manual machine operation.

The programmable controller provides multiple modes of operation.

In Manual Mode the Positioner is commanded exclusively from the hand pendant. Hard wired limit switches and direct operator input are required to manipulate the Positioner/part orientation.

Local automatic mode allows the operator to use the HMI to operate and utilize programmed steps for Positioner/part orientation.

Remote automatic mode sends and receives external I/O to control Positioner operation from an external source like a robotic control, recipes are pre-programmed in the local automatic mode.

Two methods of teaching/programming the controller are provided, a touch screen located on the main electrical enclosure and a hand pendant with teach button function.

The touch screen allows the operator to program each position through onboard programmable function keys. Multiple axis can be programmed in real life units (i.e. Inches, mm, degrees) for each position.

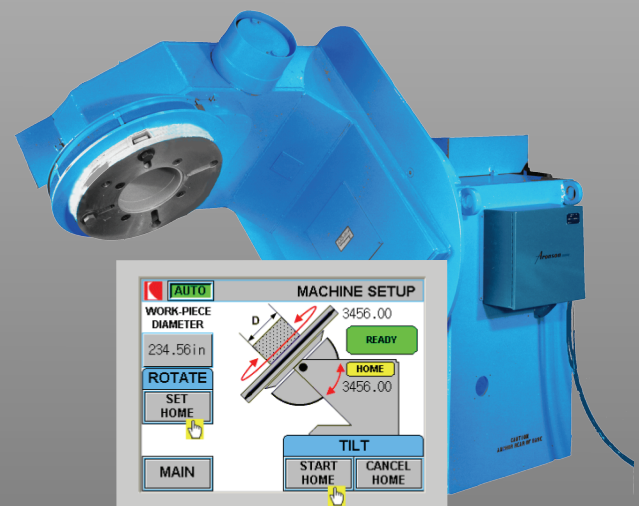
Motion dwell times can be pre-programmed for weld puddle and crater functionality. Weld on/off signal provided to control most compatible welding power sources.

**Available for all Positioner models,
Turning rolls and Head & Tailstocks**



Features

- I/O for future robotic integration
- AC Variable frequency drives and motors with encoders
- Displays position in real time
- Provides on-the-fly speed adjustments
- Calculates IPM based on Dia. value entered
- Puddle and crater weld delays
- Multi-axis control



Touch Screen HMI

Programmable Positioner Control

MACHINE SETUP

WORK-PIECE DIAMETER: 234.56 in

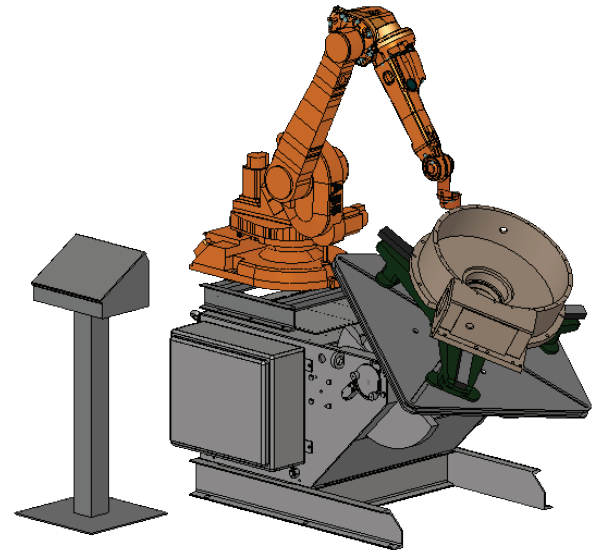
ROTATE: 3456.00

TILT: 3456.00

Buttons: MAIN, NEXT, START HOME, CANCEL HOME

Annotations:

- Press to open a keypad to enter 'Work -Piece' Diameter
- Press to reset the current Rotate position to zero
- Current Rotate Position
- Status indicator will show "READY" when 'Start Home' is permitted
- Current Tilt Position
- 'Reset Home' Commands for the Tilt axis



RECIPE TEACH FILE # 456

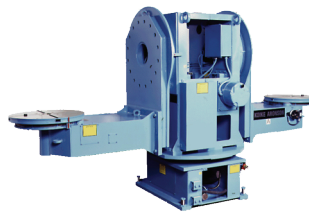
	TILT		ROTATE	
	Pos.(deg)	Speed	Pos. (deg)	Speed (ipm)
CURRENT	345.6	234.56	12345.6	234.56
STEP 456	345.6	234.56	12345.6	234.56
ENDING STEP #	456			

WORK-PIECE 'TEACH' DIAMETER: 234.56 in

Buttons: TEACH, STEP 456, END & SAVE

Annotations:

- Press to select MANUAL mode to permit machine control from handheld pendant
- Press the current speed value to select the Tilt run speed
- Current 'recipe' File Number
- Current position and speed setting
- Position and speed data for this Recipe step
- The Ending Step # for this recipe file. Press to change
- Press 'TEACH' to save the current data for this recipe step #
- Rotate Speed is represented as 'Work -Piece' surface Speed and is based on the entered diameter value
- 'Work -Piece' diameter for this recipe step. Press to open a keypad to enter a value
- Press to end Teach mode and save the recipe file



FAULT HISTORY SYSTEM FAULT

TIME	FAULT / EVENT	RESET
07:22:35	Positioner Manual	07:22:35
07:22:35	Positioner Local Auto	07:22:35
07:22:35	Positioner Remote Auto	07:22:35
07:22:35	Home Required	07:22:35
07:22:35	Home Command Permit	07:22:35
07:22:35	Home In Progress	07:22:35
07:22:35	Interrupt Home Routine	07:22:35
07:22:35	Home Sequence Timeout	07:22:35
07:22:35		07:22:35
07:22:35		07:22:35

Buttons: MAIN, RESET, FAULT ACK, DIAG.

MANUAL MODE

Buttons: MANUAL, LOCAL AUTO, REMOTE AUTO

WELD ARC OFF

	POSITION		SPEED
	DEGREES		
ROTATE START	12345.6	12345.6	234.56 RPM
	CURRENT	NEXT	234.56 IPM
TILT START	2345.6	2345.6	234.56 DEG. / MIN
	CURRENT	NEXT	

Buttons: MAIN, SETUP, PROGRAM, DIAG.

Annotations:

- MANUAL MODE: Control positioner from the handheld operator pendant
- LOCAL AUTO: Automatic positioning using the HMI
- REMOTE AUTO (OPTION): Automatic positioning using commands from external system (i.e. computer or PLC)
- Weld Arc Command Status
- ROTATE START: Press to run to the NEXT Position LOCAL AUTO mode
- TILT START: Press to run to the NEXT Position LOCAL AUTO mode
- ROTATE SPEED: Press to open a keypad for entering a new run speed LOCAL AUTO mode
- TILT SPEED: Press to open a keypad for entering a new run speed
- CURRENT Position: Displays the current position of each axis
- NEXT Position Target: Press to open a keypad for entering a new position target LOCAL AUTO mode

WELDING SETUP

Buttons: ARC START DISABLED, WELD ARC TEST

Positioner Motion Delay: 3456 ms

Weld Arc On (puddle): 3456 ms

Weld Arc Off Delay (crater): 3456 ms

WARNING! Welding arc will fire

Buttons: MAIN, SETUP, PROGRAM, DIAG.

Annotations:

- Press to Enable or Disable the Automatic Arc-Start Command
- Test Weld Arc -Start Command
- Press to open a keypad to modify timer setting