



P/N 8700



www.SherlineIPD.com

Sherline's new CNC rotary controller makes quick work of repetitive indexing jobs.

CNC motion control that's adaptable, inexpensive and easy to use

Sherline Industrial Products offers stand-alone CNC motion control modules that provide an easy way to move stepper motor-driven machine slides. They can be used individually or in concert with similar controllers to produce programmed movements. There is no need for a computer or complicated coded programs. One model is designed to control linear motion, while the other is designed to control rotary motion and is attached to its own precision 4" rotary table. These controls can change the way you, as a production designer, look at CNC.

Everything You Need is Included

The linear motion controller has its own keypad and built-in computer. Just attach the stepper motor to a slide, plug it into the controller with the included cable, enter a few simple commands on the keypad, and you're in business. The controller comes with its own power supply, a 23 frame size stepper motor, connecting cable and complete instructions. The rotary controller comes complete with the stepper motor mounted to a precision 4" rotary table. An 8-pin mini-DIN cable can be used to connect multiple units in a "daisy chain". The units can signal each other to work in sequence, allowing multiple movements to be

accomplished without the use of a computer or master CNC controller. They can also be used in conjunction with existing CNC controllers. For prototyping or for production, it's a great way to get a system up and working, right now!

Powerful Capabilities at Low Cost

Each control unit is user-programmable, with two separate programs of up to 40 operations each. A clever design allows the user to enter commands on a simple keypad to set up a number of variables, such as speed, distance and direction. In the case of the rotary controller, you control rotation in either degrees or in divisions of a circle. At the end of a motion, the controller can continue to the next step, pause and wait for a command from the user, or it can signal another controller to continue with another portion of the program. When that controller is done, it can signal back to the original controller to start over, or it can signal another controller to start yet another operation. The possibilities of this electronic "building block set" are almost limitless, yet the cost of the controllers is extremely low compared to other CNC alternatives.

An Example...

To cut a gear, you would need one linear controller and one rotary table and controller. The linear controller would rapid feed the slide to move the part up to the cutter, then proceed at the desired feed rate to cut the first tooth. It would then stop, rapid back and pause. The linear controller would signal the rotary controller to rotate the desired number of degrees or divisions of a circle. The rotary controller would then signal the linear controller to start over and cut the next tooth. All this is done

The linear motion controller can be used on any of Sherline's machine slides as a quick way to achieve CNC control.



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with a few simple keyboard commands on two stand-alone controllers. The setup is done in minutes, not hours. When this job is done, the units can be quickly reprogrammed to do other tasks.



Shown above are just a few of the Sherline accessories that will work with the industrial line of machine slides and spindles. Included are 3-jaw and 4-jaw chucks, drill chucks, collets, mill arbors, vises, hold-down clamps, a 90° angle plate, rotary table and tools like fly cutters, a boring head and a gear tooth cutter. See the web site for a more complete list and links to instructions for use of each.

Large Accessory Line

Sherline Products Inc. has been making precision miniature machine tools for over 30 years. This line was developed from the machine slides of our lathes and mills, so all the spindle and table accessories that have been designed for our machine tools will work in conjunction with the industrial machine slides and spindles. This line includes chucks, collets and a variety of hold-down clamps and vises. Like our slides and spindles, these accessories are very reasonably priced.

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FEATURES

COMMON FEATURES

- **Stepper motor resolution:** 400 steps/rev
- **Stepper motor rating:** 100 oz-in (uni-polar)
- **Power Supply:** 120VAC input; 24VDC, 1A output
- **Interface plug:** 8-pin mini-DIN connector
- **Backlash compensation:** Programmable to zero
- **Choice of indexing methods:** Programmable for continuous indexing or to wait for "Next" command at each (or any) step
- **Jog mode:** Moves the slide or table at a pre-programmed speed and at the slowest feed for setting up
- **4th Axis Interface options:** Accepts "Step" and "Direction" signals from other controllers, accepts "Sense" and sends "Acknowledge" signals for handshaking with other CNC controllers

LINEAR CONTROLLER

- **Speed:** Programmable from 1 in/min to 25 in/min
- **Distance:** from 0.0005" to 9.9995" (in steps of .0005")
- **Mode settings:**
 - INCHES: Programmable in inches to 3.5 decimal places
 - PROGRAM: 2 user-settable programs, 40 sequenced steps per program-set distance, direction, speed and "wait"
 - SETTINGS: Slow (starting ramp-up speed), Fast (Max. speed after ramp-up), Direction (in or out), Backlash compensation
- **Handwheel:** Graduations of .001" for manual control

ROTARY TABLE AND ROTARY MOTION CONTROLLER

- **Table size:** 4" diameter, 2" height
- **Table resolution:** 28,800 steps/rev ($\pm .006^\circ$ /step)
- **Rotation speed:** Programmable from 1°/sec to 50°/sec
- **Handwheel:** Graduated in 1/10° increments. Table can be driven by the controller or manually by the handwheel
- **Mode settings:**
 - DIVISION: Programmable from 1 to 999 divisions
 - DEGREE: Programmable to 3 decimal places
 - PROGRAM: 2 user settable programs, 40 sequenced steps per program-set degrees, direction, speed and "wait"
 - SETTINGS: Slow (starting ramp-up speed), Fast (Maximum speed after ramp-up), Direction (clockwise or counter-clockwise), Backlash compensation
- **Continuous running:** While running in continuous mode, speed can be reset to "faster" or "slower" setting with keypad

More Details on Our Web Site

To read the complete instructions for use of these controllers, see our web site. There you will find details on the controllers, industrial slides and spindles and Sherline accessories. Sherline Industrial Products was established from the start as an on-line business, so this web site can serve as a one-stop shopping source for all your small production tooling needs.

www.SherlineIPD.com

For miniature machine tools and accessories, visit www.sherline.com