

# Product Information

## MODEL 9600 Microprocessor Control

- Unique Design
- Controls all Jetline Motors
- State of the Art Technology
- For Longitudinal Welding
- For Circumferential Welding
- For Wire Feeders

### Introduction

The 9600 series of microprocessor controls is the latest in Jetline's range of modern, efficient and unique controls. Each 9600 control uses identical control hardware with the same size front panel and controls. Operators rapidly become familiar with the user-friendly layout.

For years, the welding industry has accepted the same type of control for motor speed and sequencing. The industry is familiar with speed control potentiometers and switches to control direction, travel jog, standard and rapid speed.

Inside these traditional controls were many relays and other electromechanical devices, all of which had a potential for failure. While, over the years, improvements were made to these controls with the addition of speed meters and ten-turn potentiometers, these were, at best, a "fix" which made only marginal improvement to the operation of the system.

### WELCOME TO THE 21st CENTURY

Jetline's new 9600 series controls are a new dimension in control technology and use. Gone are all the old ideas and outdated thinking - this range of controls is new in every feature:

- **New** microprocessor-based control technology.
- **New** solid-state circuitry to eliminate electro-mechanical relays and components.
- **New** user-friendly front panel layout
- **New** closed-loop control for higher accuracy and stability.



### Description

The 9600 series controls are designed to control all motor-driven Jetline equipment. For motors up to 1/2hp, the control incorporates a motor controller. For larger, or for extra-precision applications, the control is used with an external motor control module.

The control is housed in a cabinet with provision for mounting on the face of a travel carriage or other suitable mounting face. The unit connects with the motor and other equipment through Amphenol connectors.

The unique feature of the 9600 series of controls is that they are all software-driven. This means that a control which is identical physically can be used for many different applications. Custom-written routines, developed by Jetline software engineers, guide the operator through the set up and weld procedure. Software programs have been prepared for longitudinal welding, circumferential welding and for wire feeding.

Much research has gone into the design of the front panel. Operating switches and controls have been selected for their tactile feel. The start and stop buttons can be easily located. The stop button protrudes further than the start button to simplify identification.

Speed control is effected through a knob which incorporates detents. The operator can therefore change the travel speed in known increments. Adjustment is "speed-sensitive". A more rapid turn of the knob changes the setting in larger increments.

A large, mushroom head emergency stop switch is provided to shut down the complete process. A pushbutton switch is included to switch the main power on and off.

# MODEL 9600 MICROPROCESSOR CONTROL

Setting of the speed and other features is aided by a backlit LCD display. Custom-designed software takes the operator through a set of routines to permit the setting of speed, delays and other ancillary operations. The operator scrolls through the options using two touch-sensitive pads at the side of the display.

A second pair of touch-sensitive pads at the lower right corner of the front panel provides jogging capabilities. Jog speeds for forward and reverse jog are independently adjustable.

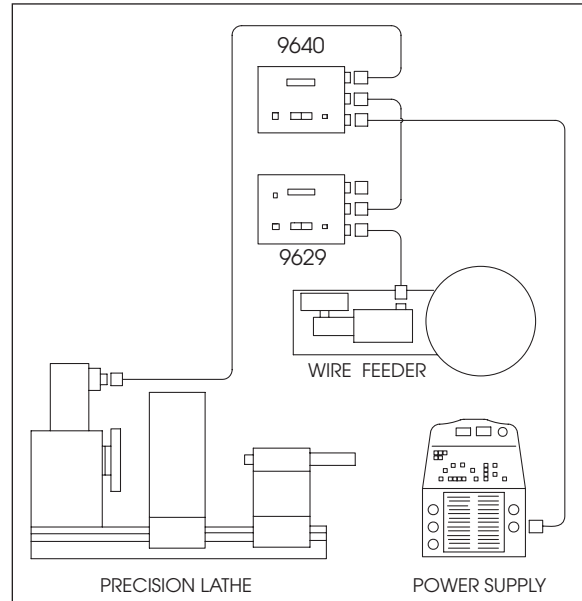
In addition to the convenient mode of operation, the system includes setup and calibration modes. These can be used to signal associated events and to set and check the calibration of the system - this is an ideal routine for regular calibration checking.

## Applications

**Longitudinal Welding:** The 9627 control is supplied as standard with all Jetline side beam travel carriages. In addition to speed control (with closed loop if desired), travel start and stop delays can be set. The 9627 can be interfaced with a suitable power supply. The start and stop buttons will then also control the starting and stopping of the power supply weld program. Weld length can be determined as a function of time or by a signal from a limit switch or encoder. An automatic home sequence can be programmed.

**Circumferential Welding:** The 9640 control is used for Jetline circumferential systems. It can be used to control precision lathes as well as controlling larger positioner systems, and head and tailstock systems. Like the 9627, the control includes speed control, start and stop delays, and the ability to switch the welding power supply on and off. For its use with circumferential applications, the 9640 control includes a feature which permits the diameter of the part being welded to be entered. When this is done, programming of the travel speed is made as surface speed.

**Wire Feed:** The 9629 control has software routines which make it perfect for the control of wire feeders. In addition to speed control, start and stop delays, the operator can set the wire retract distance at the end of the weld. All Jetline wire feeders are supplied with the 9629 control. This control can be used for stand-alone wire feed control or in conjunction with another 9600 unit.



**Combined Operation:** Two 9600 series controls can be interconnected as shown in the above diagram. When the connection is made in this manner, the travel controller acts as the primary control with the wire feed controller acting as a secondary unit. The primary control also provides start and stop signals for the welding power supply.

This mode of operation adds a new dimension to the 9600 control. As each control includes start and stop delay times, their combined operation provides complete weld sequence control. The operator is therefore able to control the complete weld sequence, including arc starting and stopping, from the primary 9600 control.

## Specifications

Processor: Intel 80C196KC, 16Mhz.  
Keypad: Hybrid Tactile/Membrane  
Display: 2 x 20 line backlit LCD  
Outputs: 1 Analog, 8 Digital  
Inputs: 1 Analog, 8 Digital  
Input Power: 120 or 240V, 1 phase, 50/60Hz

## Dimensions

Height: 8 inches (200 mm)  
Width: 10 inches (250 mm)  
Depth: 6 inches (150 mm)  
Weight: 15 lbs (7 Kg)

See Jetline price list for complete ordering information

Distributed by:

**Jetline<sup>®</sup>**  
engineering  
An Illinois Tool Works Company

15 Goodyear St., Irvine, California 92618 USA

Tel: (949) 951-1515 • Fax: (949) 951-9237 • E-mail: sales@jetline.com

Web Page: [www.jetline.com](http://www.jetline.com)