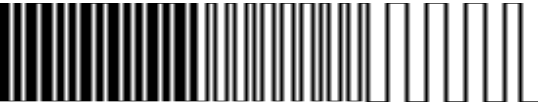


Affordable Automation  
for Welding, Cutting and  
Semi-Automatic Processes

## AUTOMATIC HEIGHT CONTROL



The **CAS-0100 AUTOMATIC HEIGHT CONTROL** is a compact, easy to use accessory for Bug-O Systems equipment which is designed to maintain a constant welding torch-to-work distance. This control can be used with Sub Arc, Innershield and MIG welding. It includes a solid-state control box and a motorized slide which will bolt onto any standard Bug-O Systems carriage and can be used for a wide variety of welding applications where a constant arc length is critical. This system requires a constant voltage (CV) power supply for operation.

*PATENTS WORLDWIDE*



# BUG-O SYSTEMS

A DIVISION OF WELD TOOLING CORPORATION



280 TECHNOLOGY DRIVE CANONSBURG, PENNSYLVANIA 15317-9564 USA  
PHONE: 1-412-331-1776 <http://www.bugo.com> FAX: 1-412-331-0383



# AUTOMATIC HEIGHT CONTROL

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With the CAS-0100 the actual weld current is sensed continuously by means of a current shunt, 50mV full scale. The signal is filtered, amplified and compared to a set point value. Any error is fed to a second order control loop which sends a velocity signal to the height adjustment drive.

The control holds the error to zero for a flat piece of work, or for a weld with a uniform rise along its length. The drive for the motor is a four-quadrant servo control which enables smooth accurate height corrections. Therefore, the control can easily follow contours.

In addition to BUG-O carriages, the CAS-0100 can be used on fixtures or manipulators to provide constant wire stick-out length.

It provides automatic control of welding torch-to-work distance with the following:

- Multi-turn potentiometer, for adjusting current set point, which is directly read from a turn-counting dial.
- Automatic shut-off of height-adjusting drive when current is off or falls below a pre-set lower limit.
- Built-in time delay after arc is struck before drive activation.
- Manual up-and-down height adjustment buttons which override automatic controls, and function when drive is either active or inactive.
- Speed potentiometer sets adjustment speed in manual mode and also limits top speed in automatic mode.
- Self-contained control, independent of the rest of the equipment, such as drives, power sources, wire feeders, etc.

**NOTE: CAS-0100 requires a 50mV Current Shunt (500 amp min.)  
BUG-O Part No. S17078-5) (Not supplied with CAS-0100)**

## Technical Data:

### Power

**Requirements:** CAS-0100 120 VAC/50-60HZ/1PH  
CAS-0102 240 VAC/50-60HZ/1PH  
CAS-0104 42 VAC/50-60HZ/1PH

**Vertical Travel:** 4" (100 mm)

**Load Capacity:** 20 lb (9.1 kg) within 4" (100 mm) of the slide's mounting plate.  
The slide uses a slip clutch to protect the motor from overloads.

**Net Weight:** Slide: 9 lb. (4.1 kg) Control Box: 6 lb (2.7 kg)

**Dimensions:** Slide: 5.00"W x 15.25"H x 2.38"D  
(127 mm x 387 mm x 60 mm)

**Control Box:** 8.00"W x 4.50"H x 3.63"D  
(203 mm x 114 mm x 92 mm)