

PIPER-BUG

Mechanized Pipe Welding System from Bug-O

1-412-331-1776 www.bugo.com

Mechanized Pipe Welding System

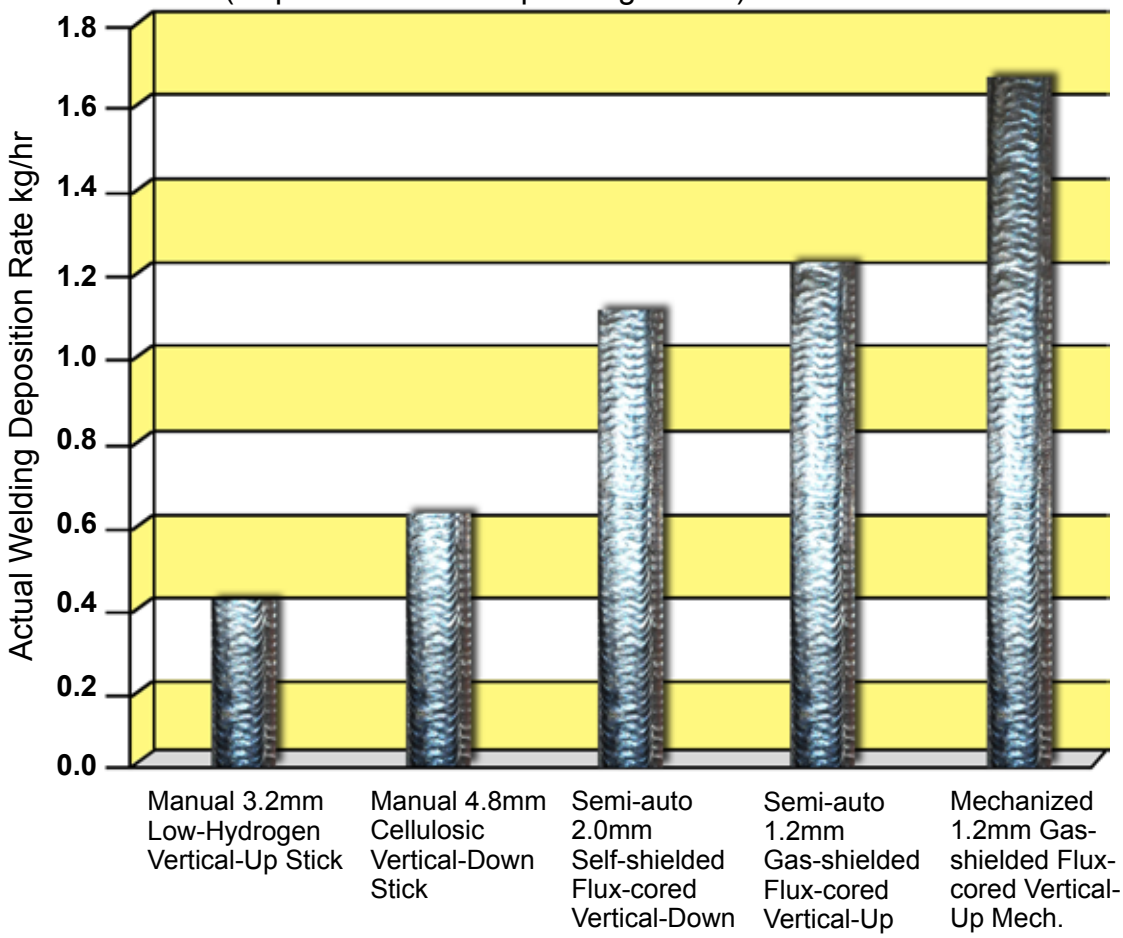


The **PIPER-BUG** is a self contained, digitally controlled, mechanized pipe welding system, producing high deposition rates with excellent weld quality to reduce pipe welding costs. Increased duty cycle and arc-on time provide significant improvements in productivity. All welding parameters, including voltage, wire feed speed, current, travel and oscillation are programmable and digitally controlled with the Piper-Bug.

Manual pipe welding requires a high level of training and skill. As skilled pipe welders become more difficult to find, mechanized welding is an economical alternative. Less welder skill and physical effort are required using mechanized welding. Handheld wire welding results in a typical operating factor (or percent arc-on time) of 40-50%, mechanizing increases the operating factor to 70% or higher. The increased arc on time reduces the number of welders and welding stations required. Also, the precise procedure control and excellent repeatability ensures consistent weld quality around each pipe joint and from one joint to the next.

Actual Welding Deposition Rate

(Deposition Rate x Operating Factor)







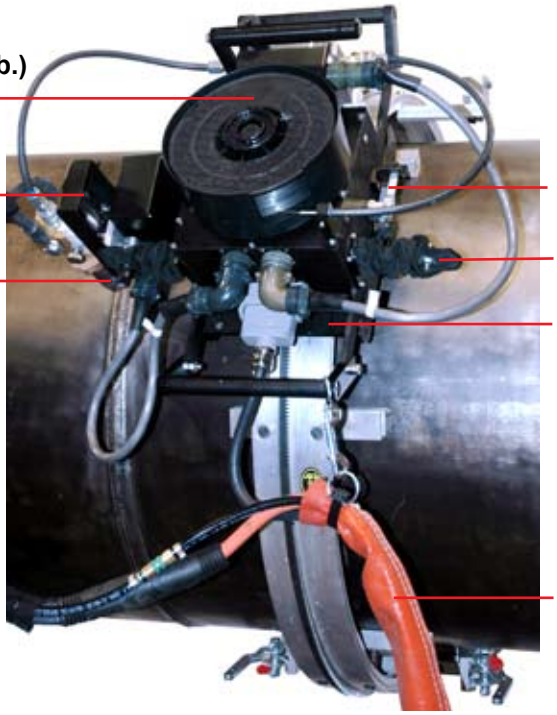


Mechanized Pipe Welding System

Piper-Bug Overview

The **BUG-O PIPER-BUG** is a complete Pipe Welding System that includes the welding power source.

- Unique digital control box.
- Microprocessor controlled panel with graphic and pendant user interfaces.
- Drive unit with torch (5-Kg/10 lb spool on board) or 15 Kg/33 lb separate feeder.
- Two pendant user options.
- Quick attach aluminum rigid ring rail with spring loaded spacer bars.
- Lincoln Electric welding power source.
- Lincoln Electric supported welding procedures.
- Built tough for demanding environments. Rated for operating temperatures from -20° C (-4° F) to 50° C (122° F) and up to 100% RH.





Features:

- Closed loop feedback.
- Distinctive on-board current monitoring and adjustments.
- Programmed for exact multi-parameter output.
- Supervisor set operating limits to every adjustable parameter.
- Pre-programming of an infinite number of procedures and weld passes.
- Air-cooled or optional water-cooled torch fittings.



Benefits:

- Travel speed can be calibrated to provide actual travel speed on pipe O.D.
- Maintains constant torch height, ensuring stable welding arc and consistent heat input.
- Wire feed input can be tuned to deliver the exact amount of wire at the arc.
- Accurate process control.
- Allows for many different weld geometries and material thicknesses.
- Water cooled torch can be used for heavy wall pipe applications.

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Ring Rail

Features:

- Quick attach aluminum rigid ring rail mounts quickly and easily to the pipe.
- Spring loaded spacer bars adjust and center the ring to the pipe surface.
- Powerful latches lock the rail into position.
- Machine mounts quickly to the rail using standoffs and a split carriage.





Benefits:

- Lightweight and easy to move from pipe to pipe.
- Fast setup.
- Large surface area on spacer bars reduces marking of the pipe surface.

Interfaced Power Source

Features:

Lincoln Electric Invertec® V350-PRO supplied with system.

- Multi-process inverter, MIG, Stick, TIG, Arc Gouging.
- 425 amp power source; 300 amps 100% duty cycle.
- Smart robust design.
- Portable.

Benefits:

- Flexibility with processes when not used on the pipeline.
- Energy efficient.
- Rough handling - tried and tested all over the pipeline world.
- Easy to use controls.

Piper-Bug Pipe Welding Kit

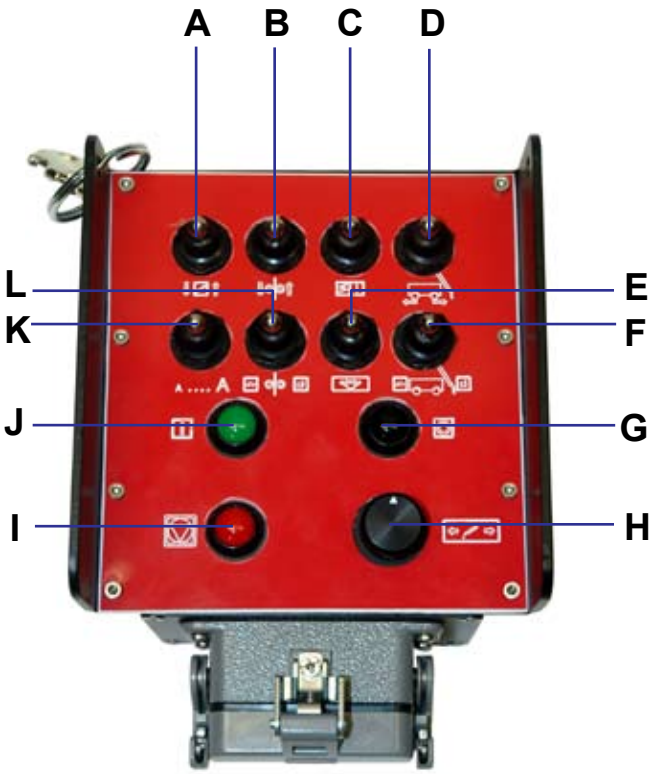


PWS-2150

Each **PWS-2150 Kit** includes the following:

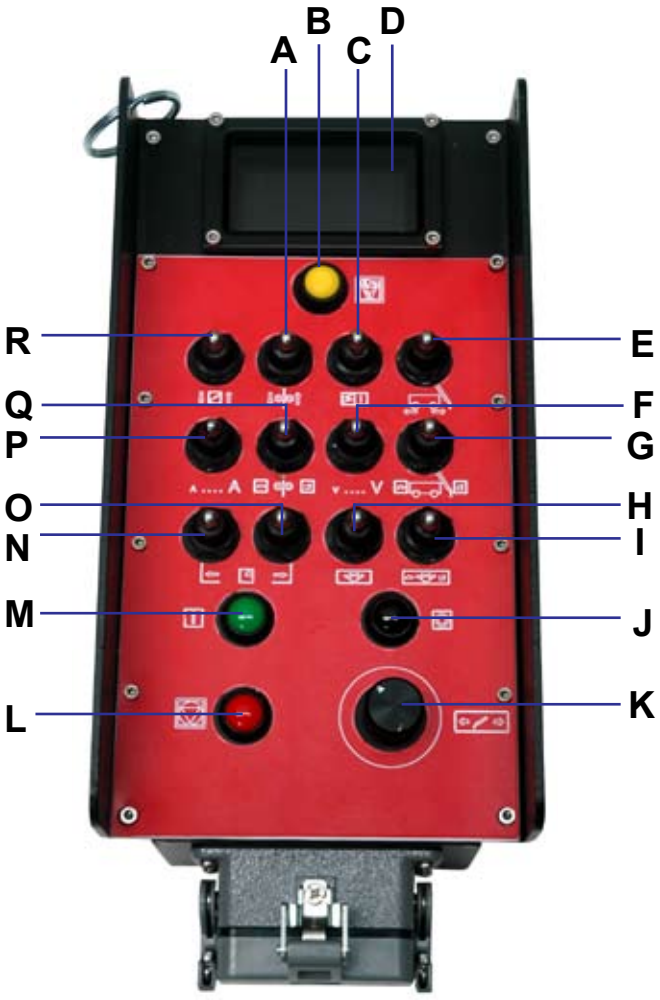
- Drive Unit
- Control Box
- Pendants
- Invertec® V350-PRO Welding Power Source
- Gas Regulator
- Cables
- Size Specific Drive Roll Kit

Mechanized Pipe Welding System



Limited Function Pendant:

A. Torch Jog - Up/Down
B. Wire Feed Jog – In/Out
C. Oscillation Check
D. Travel Jog – Forward/Reverse
E. Welding Voltage – Increase/Decrease
F. Tractor Travel Speed – Increase/Decrease
G. Cycle Stop (Gas Purge in Jog Mode)
H. Torch Position Steering
I. Emergency Stop
J. Cycle Start
K. Welding Current – Increase/Decrease (Adjusts torch height while welding)
L. Wire Feed Speed – Increase/Decrease



Full Function Pendant:

A. Wire Feed Jog – In/Out
B. Welding Pass Select
C. Oscillation Check
D. Display Screen - Provides selected welding parameter information to the operator
E. Travel Jog – Forward/Reverse
F. Welding Voltage – Increase/Decrease
G. Tractor Travel Speed – Increase/Decrease
H. Oscillation Width – Increase/Decrease
I. Oscillation Speed - Increase/Decrease
J. Cycle Stop (Gas Purge in Jog Mode)
K. Torch Position Steering
L. Emergency Stop
M. Cycle Start
N. Oscillation Dwell Time Left - Increase/Decrease
O. Oscillation Dwell Time Right - Increase/Decrease
P. Welding Current – Increase/Decrease (Adjusts torch height while welding)
Q. Wire Feed Speed – Increase/Decrease
R. Torch Jog - Up/Down

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Control Box



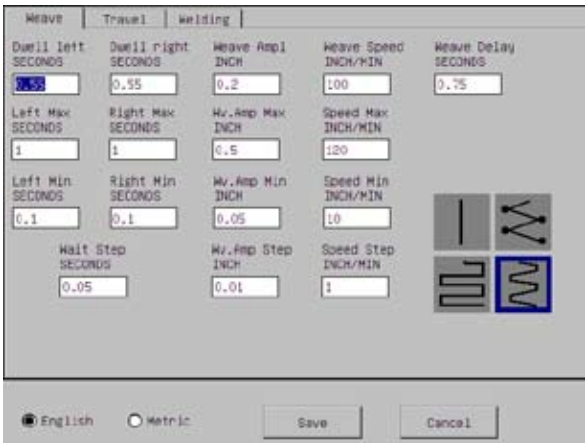
Features:

1. Microprocessor controlled panel with graphic and pendant user interfaces.
2. The large LCD panel allows quick viewing of large groups of related information.
3. Intuitive parameter input using a touch mouse and keypad.
4. USB port for program upload and download.

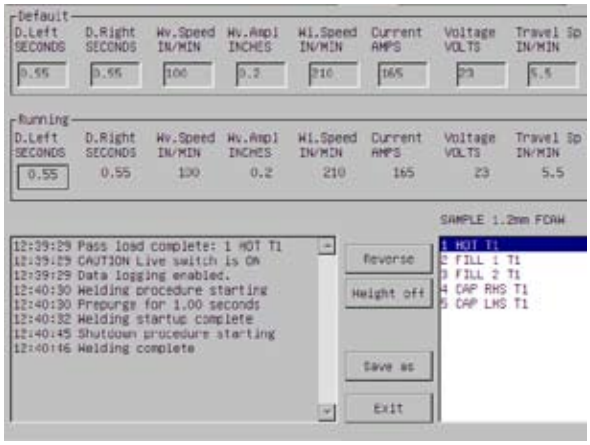
Programming:



Primary Organization Screen – Allows project managers the ability to organize and modify information for each application. This information is password protected. Limited access ensures repeatability and accountability.



Parameter Input Screen – All data for the weld pass is input here. Unique tabs are supplied in this screen for Weave Data, Drive Travel Data and Welding Data. Data is input with upper and lower limits for each individual parameter thus ensuring that the resulting weld is within specifications.



Operating Screen – This screen is displayed during operation. The pre-set points for the pass are displayed along with the actual data being used. The message screen in the lower left corner displays the operation sequence as they occur and also displays error messages. The lower right screen displays the weld pass that is active along with all other passes that are available to be selected.

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Electrodes:

The **PIPER-BUG** is designed to work with Lincoln Electric's premium Piperliner® gas-shielded flux cored wires.

PIPELINER





Pipeliner® is Lincoln Electric's family of premium Stick (SMAW), MIG (GMAW), Flux-Cored Gas-Shielded (FCAW-G) and Flux-Cored Self-Shielded (FCAW-S) consumables developed specifically to meet the rigorous demands of the global pipe welding industry.

Pipeline Process Control™ Manufacturing
Performance tops the list of what contractors and welders want from pipe consumables – Pipeliner® delivers. Lincoln Electric's Pipeliner® manufacturing operations throughout the world are tightly controlled and routinely pass quality assurance audits by agencies and pipe welding professionals from around the world. This extraordinary emphasis on the integrity of the Pipeliner® manufacturing processes results in consumables with unmatched performance characteristics and consistency.





Mechanized Pipe Welding System

Power Requirements:
120/240 VAC/50-60/1

Linear Speed:
0-2000 mm/m (0-80 ipm), +/-1%

Weave Speed:
125-3300 mm/m (5-130 ipm), +/- 1%

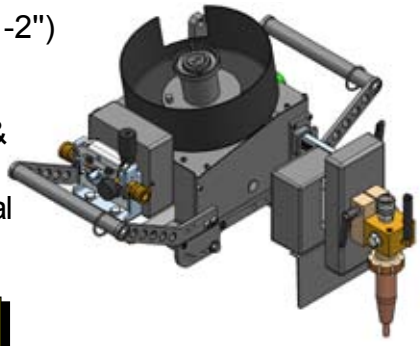
Wire Feed Speed:
125 – 1150 cm/m (50-450 ipm), +/- 1%

Wire Size:
0.9 – 1.6 mm (0.035 – 1/16")

Dwell Times:
0-10 seconds left & right, independent

Weave Width:
.25-50 mm (.01-2")

Steering:
50 mm (2") left & right of center, 100 mm (4") total



Load Capacity:
27 Kg (60 lbs.) total.

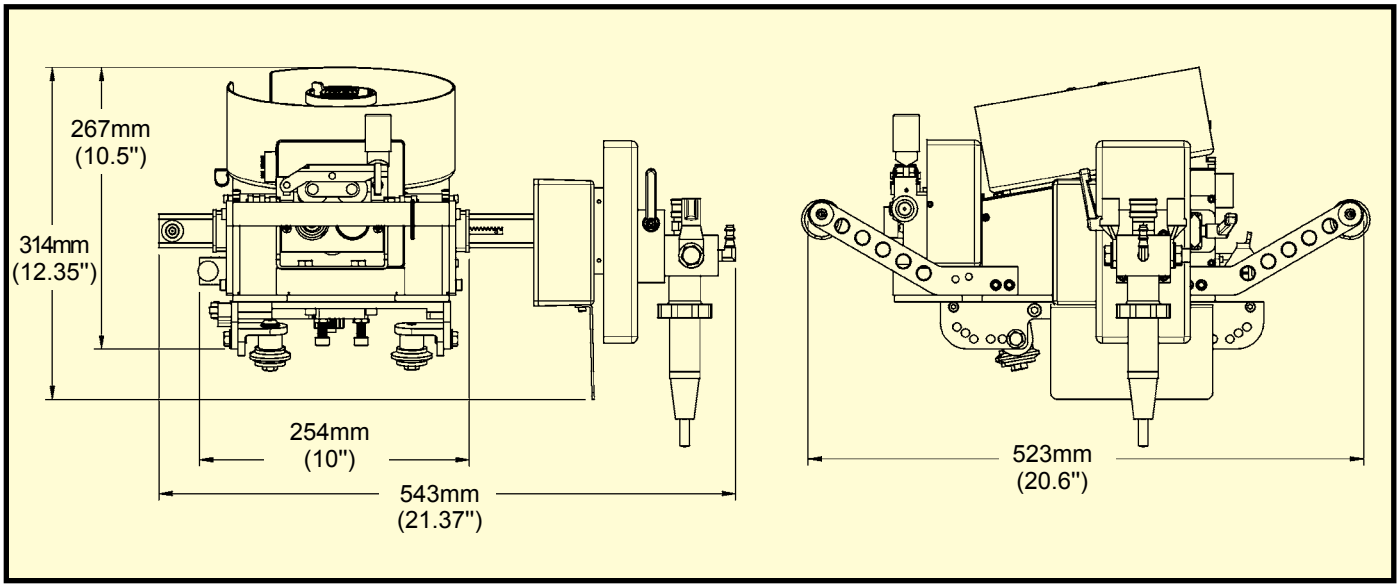
Net Weight (w/o spool):
17.1 Kg (37.7 lbs.) Feeder on Head
(Optional) 12.9 Kg (28.4 lbs.) Feeder on Floor

Dimensions:
523 x 543 x 314 mm (20.6" x 21.37" x 12.35")

Operating Temperature Range:
-20° C to 50° C (-4° F to 122° F)



Dimensions:



 ©Weld Tooling Corp. ΧΡΙΣΤΟΣ ROM 1:16 Litho in U.S.A. **LIT-PIPER-BUG-BRO-0909**