K-BUG 5100

COMPACT PENDULUM WEAVE WELDER

Bug-O Systems is committed to empowering our customers by providing operator controlled mechanization solutions for their welding, cutting and custom applications.
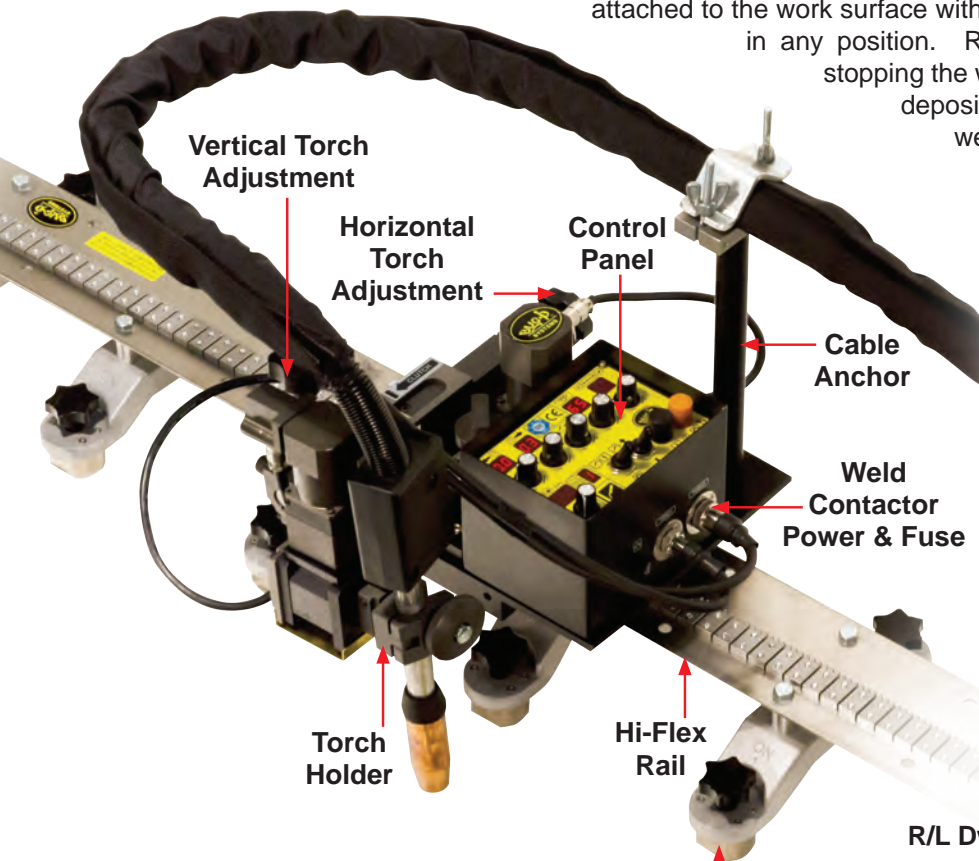
412-331-1776   www.bugo.com

K-BUG 5100 DIGITAL COMPACT ALL POSITION WEAVE WELDER

The **KBUG-5100** is a compact portable welding unit with an integrated pendulum weaver for all position welding. Mounted to BUG-O Systems Hi-Flex rail and attached to the work surface with magnets or vacuum cups and pump system in any position. Regulated travel speed without starting and stopping the welding process will eliminate excessive weld deposition and help reduce defects. Precise weld weaving with programmable dwells will improve weld penetration and control undercut.

Control of all tractor and welding functions can be set or adjusted on the tractor's panel or remotely via wireless remote control. Maximum wireless remote control range is 32 ft. (10 m). Remote includes a magnetic back for operator convenience.

Vertical Torch Adjustment

Horizontal Torch Adjustment

Control Panel

Cable Anchor

Weld Contactor Power & Fuse

Torch Holder

Hi-Flex Rail

On/Off Magnet Bar Assembly

Wireless Remote Control

R/L Dwell Time

Torch Position Adjustment

Weave Width

Weave Speed

Travel Speed

Weave Pattern

Weld Contactor Switch

Travel Direction

Cycle Start

Cycle Stop

Five Weave Patterns
to choose from with just a push of a button.

1. **NO WEAVE-** Straight line
2. **RUN-** The tractor moves continuously during the weave and dwell
3. **WEAVE-** The tractor and weave both stop during dwells
4. **STEP-** The tractor is stationary during the weave and moves only during the dwell
5. **TRACTOR STOP ON DWELL-** When the weave moves away from tractor, the tractor is stationary When weave moves towards tractor, the tractor also moves

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K-BUG 5100 DIGITAL COMPACT ALL POSITION WEAVE WELDER

Features:

- High torque, low inertia motor for precise stops and starts
- Lightweight and easy to carry, weighing just 18 lbs. (8.2 kg)
- Hi-Flex Rail with rack and pinion drive insures precise path and consistent speed
- Hi-Flex Rail flat or bent inside/outside to a radius of 30" (762 mm)
- Precision drive motor prevents unit from moving when power is off
- High geared pendulum motor prevents torch movement when power is off
- High speed motor for pendulum weaving
- Programmable puddle control and crater fill
- Independent control of pendulum weaving right and left dwell times
- Drive unit motor overload protection
- Closed loop speed and position control for adjustable and repeatable operation
- Closed loop speed control to prevent drift from center weld position
- Storage of welding parameters after power is turned off
- Carriage Travel and arc start in one switch
- Wireless Remote Control
- Independent control of puddle build and crater fill
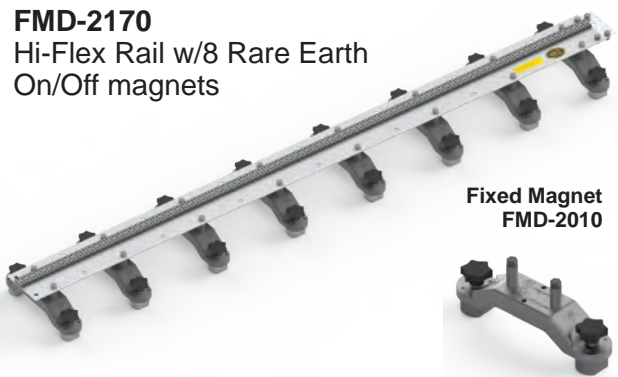- Weld Contactor ON/OFF Switch
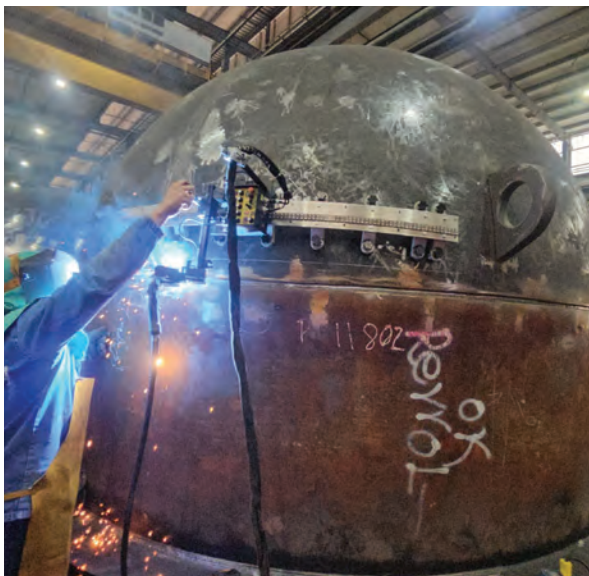
Racking Option:
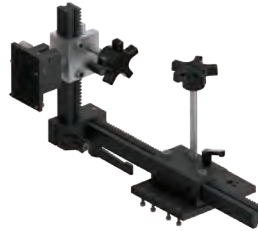
KBUG-5115
Optional Bug-O Style racking group

Rail Options:

The **K-BUG 5100** package is designed to run on Bug-O Systems Hi-Flex Rail (FMD) for uses in curved or straight line applications. Carriage wheels run on stainless steel rail that can be mounted with magnets or vacuum system.
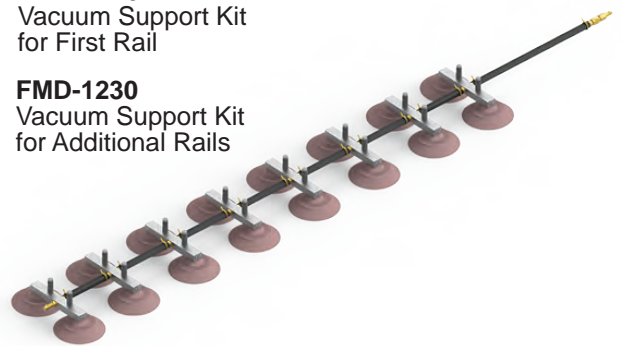
FMD-2170
Hi-Flex Rail w/8 Rare Earth On/Off magnets

Fixed Magnet FMD-2010

FMD-1220
Vacuum Support Kit for First Rail

FMD-1230
Vacuum Support Kit for Additional Rails

Vacuum Pump Kit
(Necessary for use w/vacuum cups)

| ARV-2020 | 120 Volt/50-60 Hz | or | 100-1297-120 | 120 Volt/50-60 Hz |
| ARV-2030 | 240 Volt/50-60 Hz | | 100-1297-240 | 240 Volt/50-60 Hz |

Accessories:

All-In-One (AIO) Mechanized Guns for KBUGs
Choose from the options below to fit your application.

1 GUN

Each gun includes:

5X 100-0490 / 65-3103
EHD Retaining Head/Diffuser

10X 100-0489 / 65-1135
EHD Contact Tip 0.035"

10X 100-0488 / 65-1145
EHD Contact Tip 0.045"

2X 100-0635 / 65-2550 Nozzle,
Copper 1/2" Bore, 1/8" Tip Recess

1X 100-0492 / 64-4515 0.045-1/16",
15 Ft., Coil Liner

100-1011-1-4.5-XX 500 amp Lightning Auto Gun, 180 degree gooseneck
with integrated cable management system

100-1011-1-4.5-T *Includes 100-0484 Tweco #4 Power Pin*

100-1011-1-4.5-M *Includes 100-0485 Miller Power Pin*

100-1011-1-4.5-L *Includes 100-0486 Lincoln Power Pin Old Style*

2 BUG-O TRIGGER CABLE
Connects the contact cable in the torch to the contact trigger amphenol on the bug.

100-1012-3-0.15 KBUG-2T-F
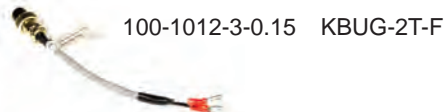
3 AIO TO BUG POWER ADAPTER (Bug End)

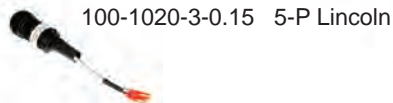100-1013-3-0.15 AC Power Cable, KBUG, 0.15M

4 WIRE FEEDER TRIGGER CABLES (Feeder End)
Required to choose 1
Connects the contact cable in the torch to the wire feeder.

100-1020-1-0.15 (two male spade connectors)   100-1020-2-0.15 4-P Miller

100-1020-3-0.15 5-P Lincoln

5 STANDARD POWER CORD (From Rear of Gun Cable to Power Input)

BUG-9454 120VAC   BUG-9454-240 240VAC

BUG-9454-42 42VAC

Contact American Torch Tip for other consumables: 800-342-8477

Optional Torch Holders Available:

**KBUG-3120-1
1" Torch Holder**

**KBUG-4190
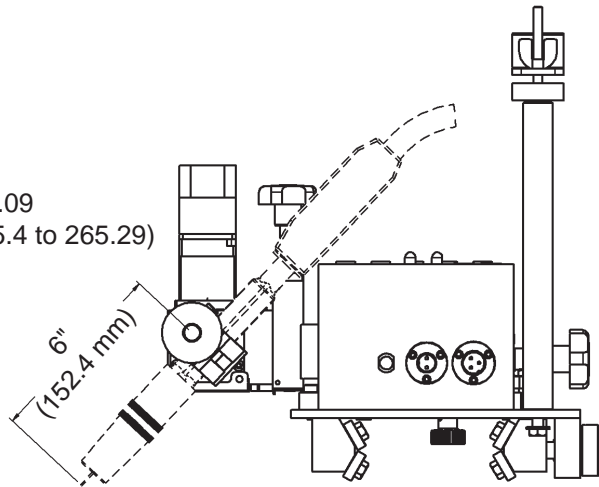1" KBUG Gun Clamp 3/4"-2"**

**100-0953
Gun Clamp Assembly 3/4"-2"**

K-BUG 5100 DIGITAL COMPACT ALL POSITION WEAVE WELDER

Technical Data:

Power Requirements:
KBUG-5100   120VAC/50-60Hz/1Ph
KBUG-5102   240VAC/50-60Hz/1Ph

Net Weight: 18 lbs. (8.2 kg.)

Shipping Weight: 24 lbs. (10.9 kg.)

Welding Position: All position

Torch Holder: Fits barrels up to 0.75 in (19 mm) dia.

Vertical Lifting Power: 50 lbs. (22.7 kg.)

Tractor Dimensions:
(WxLxH) *inch:* 12.34 to 14.9 x 9.67 x 8.48 to 10.09
mm: (313.44 to 378.46 x 245.62 x 215.4 to 265.29)

Torch Support Adj.:
Y-Stroke: 2.05" (52 mm) ± 5%
Z-Stroke: 1.69" (43 mm) ± 5%

SPK-KBUG-5000:   Spare Parts Kit

Weaver Speed: 0 to 188 in/min (477 cm/min)

Weave Width*:   0 to 1.23" (31.24 mm)

Cycles*: 68 cycles per min. at 1.05" (26.67 mm) stroke
115 cycles per min. at .525" (13.34 mm) stroke
200 cycles per min. at .25" (6.35 mm) stroke

Digital LED speed indicator: 1 to 34.7 ipm (25 to 88 cm/min)

6" (152.4 mm)

* When torch Pivot-to-Tip length is 6" (152.4 mm) as shown above. Increasing the Pivot-to-Tip length will increase the maximum speed and the weave width.

Dimensions:

13.8" (350 mm)

Min.= 12.3" (312 mm)
Max.= 14.9" (378 mm)

9.7" (246 mm)