

Flexible Automation of Cutting & Welding Applications

**Flexible Automation von
Schweiß- und Schneidarbeiten**

**Automatización flexible para
corte y soldadura**

**Automatisation Flexible
d'applications de Soudure et
de Coupe**



Build a Bug

For more detailed information on any product, visit our website where you can download literature and "build a bug".



Phone: 412-331-1776
Fax: 412-331-0383

www.bugo.com

Bug-O Systems is guided by honesty, integrity and ethics in service to our customers and in all we do.



Six Ways Automating Your Welding & Cutting Can Save You Money!



Increase Production

Continuous travel increases process "ON" time.

Improve Quality

Precise speed and path control improve appearance and quality.



Reduce Material Handling

Take the small lightweight machine to the work. Work in all positions.

Reduce Distortion

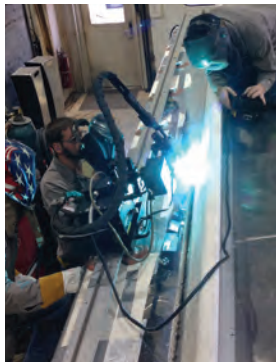
Provides uniform heat input, puts the right amount of weld in the right place.

Improve Worker's Environment

Keeps the worker further away from the arc and reduces operator fatigue.

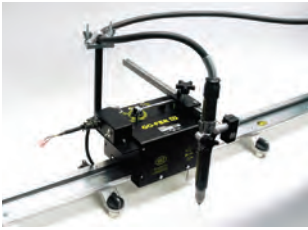
Adaptable

Flexible modular construction that adapts to your job.



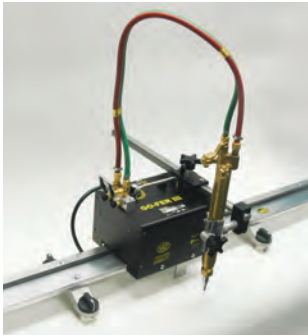


Straight Line Cutting & Welding with Rails



GO-FER CUTTING KIT-PLASMA

Straight line cutting and beveling machine for plasma
120, 240 or 42 volt
Speed: 8-100 ipm
(200-2500 mm/min)
Weight: 39 lbs. (17.7 kg)



GO-FER CUTTING KIT-OXY-FUEL

Straight line cutting and beveling for oxy-fuel
120, 240 or 42 volt
Speed: 8-100 ipm,
(200-2500 mm/min)
Weight: 39 lbs. (17.7 kg)



GO-FER WELDING KIT

Straight line semi-automatic welding
120, 240 or 42 volt
Speed: 2-50 ipm,
(50-1250 mm/min)
Weight: 39 lbs. (17.7 kg)



Straight Line Cutting & Welding with Rails



TRAC-BUG OXY-FUEL

Straight line track burning machine for oxy-fuel or plasma
120, 240 or 42 volt
Speed: 4-72 ipm
(100-1800 mm/min)
Weight: 33 lbs. (15 kg)



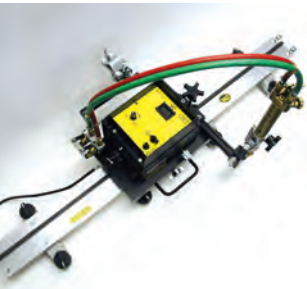
DC-IV

Rack and pinion drive with six speed ranges available. Runs on aluminum rigid and semi-flex rail.
42, 120 or 240 volt
Weight: 18 lbs. (8 kg)



MODULAR DRIVE SYSTEM

Stitch welding kit
110, 220 or 42 volt
Adapts to all Bug-O rail
Speed: 2-120 ipm
(51-3048 mm/min)
Weight (machine only):
30 lbs. (13.61 kg)



MODULAR DRIVE SYSTEM

Straight Line Cutting Kit
110, 220 or 42 volt
Adapts to all Bug-O rail
Speed: 2-120 ipm
(51-3048 mm/min)
Weight (machine only):
28 lbs. (12.7 kg)



Straight Line Welding with Oscillation



UNIVERSAL BUG-O-MATIC

Compact drive and
weaver combination.

Adapts to all Bug-O rail
120, 240 or 42 volts

Speed: 3-66 ipm
(70-1670 mm/min)

Weight: 22 lbs. (10.5 kg)



MODULAR DRIVE SYSTEM

Linear weaver kit

110, 220 or 42 volt

Adapts to all Bug-O rail

Speed: 2-120 ipm
(51-3048 mm/min)

Weight (machine only):
41 lbs. (18.6 kg)



MODULAR DRIVE SYSTEM

Pendulum weaver kit

110, 220 or 42 volt

Adapts to all Bug-O rail

Speed: 2-120 ipm
(51-3048 mm/min)

Weight (machine only):
40 lbs. (18.14 kg)



Pipe Welding/Cutting



PIPE WELDING SYSTEMS

Piper-Bug & Piper-Plus

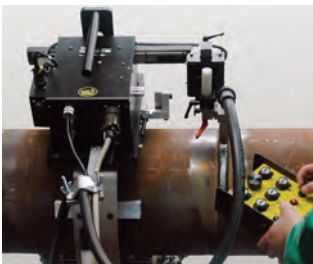
- Self contained, digitally controlled - Produces excellent quality repeatable welds with high deposition rates
 - Fully integrated with power sources - advanced process control available (STT, GMAW-P, etc)
 - Pipe Diameter 12 inches and larger
 - Air-cooled & Water-cooled options available
- 120 or 240 volts
Speed: 0-80 ipm,
(0-2000 mm/m)



MODULAR DRIVE SYSTEM

A versatile machine that can be customized for pipe welding

110, 220 or 42 volt
Adapts to all Bug-O rail
Speed: 2-120 ipm
(51-3048 mm/min)
Weight: 39 lbs. (17.5 kg)



UNIVERSAL BUG-O-MATIC WITH AUTO HEIGHT CONTROL

An Excellent Choice for Pipe Welding for ease of operation.

120, 240 or 42 volts
Speed: 4-100 ipm
(100-2500 mm/min)
Weight: 36 lbs. (16 kg)



Welding with Automatic Height Control



MODULAR DRIVE SYSTEM

A versatile machine with automatic height control
110, 220 or 42 volt
Adapts to all Bug-O rail
Speed: 2-120 ipm
(51-3048 mm/min)
Weight: 45 lbs. (20 kg)



UNIVERSAL BUG-O-MATIC WITH AUTOMATIC HEIGHT CONTROL

Same as Universal Bug-O-Matic but with additional amperage sensing automatic torch height adjuster
Adapts to all Bug-O rail
120, 240 or 42 volts
Speed: 4-100 ipm
(100-2500 mm/min)
Weight: 36 lbs. (16 kg)

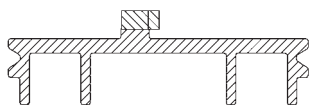


FREESTANDING TORCH SUPPORT WITH AUTOMATIC HEIGHT CONTROL

110 or 220 volts
Total Vertical Adjustment: 25" (635 mm)
Total Horizontal Adjustment: 25" (635 mm)
Weight: 41 lbs. (19 kg)



Rails

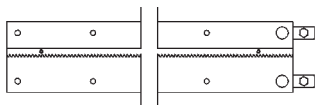


RIGID RAILS

Heavy Duty

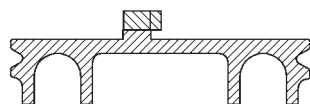
ARR-1080

8' (2.37 m) Long sections



ARR-1085

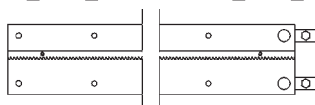
4' (1.18 m) Long sections



Extra Heavy Duty

ARR-1250

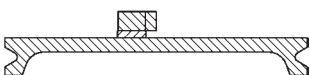
8' (2.37 m) Long sections



ARR-1200

4' (1.18 m) Long sections

Hard coat rails available upon request for above.

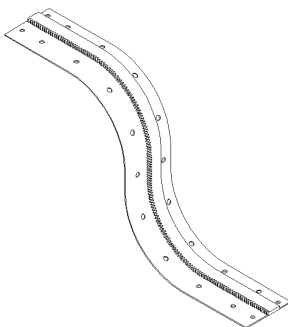


SEMI-FLEX RAIL

Flexes to 15' (5 m) radius

AFR-3000

8' (2.37 m) Long sections



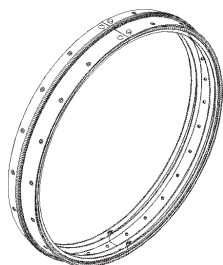
HI-FLEX RAIL

Flexes to 30" (760 mm)

Radius

FMD-1050

57.7" (1.47 m) Long sections

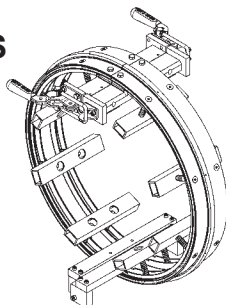


RING RAILS

Minimum work

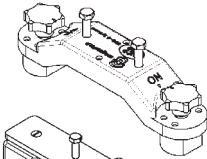
diameter of

9" (230 mm)





Magnet Bars

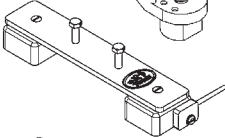


R.E. ON/OFF MAGNET

For Aluminum Rigid Rail
ARM-2010

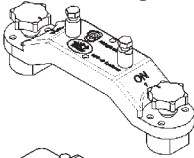
High Heat Applications*

ARM-2010-HH



SWIVEL MAGNET

For Aluminum Rigid Rail
ARM-2325

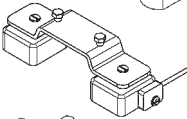


R.E. ON/OFF MAGNET

For Semi-Flex Rail
AFR-2010

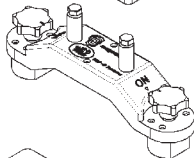
High Heat Applications*

AFR-2010-HH



MAGNET W/ RELEASE

For Semi-Flex Rail
ARM-2425

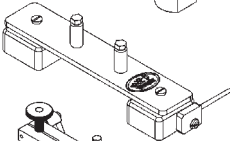


R.E. ON/OFF MAGNET

For Hi-Flex Rail
FMD-2010

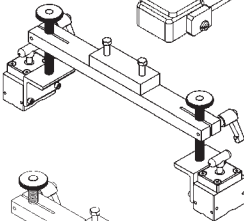
High Heat Applications*

FMD-2010-HH



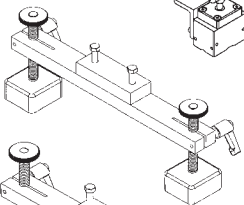
MAGNET W/ RELEASE

For Hi-Flex
FMD-2325



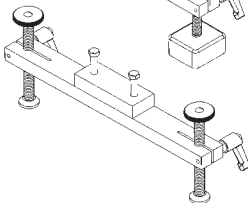
SUPPORT BAR WITH R.E. ON/OFF MAGNETS

For Bent Rail
3.5" (88.9 mm) of adjustment
ARM-2580



Support Bar w/ Magnets

For Bent Rail
3.5" (88.9 mm) of adjustment
ARM-2480



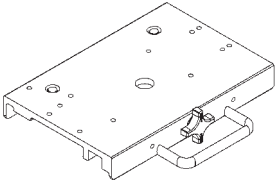
Support Bar w/ Screw Feet

For Bent Rail
4.5" (114.3 mm) of adjustment
ARM-2380

* High Heat App.= Rated @ 180°C (356°F)
Standard Heat= Rated @ 80°C (176°F)

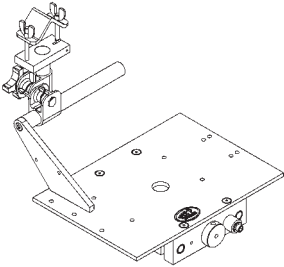


Carriages - Vacuum Support



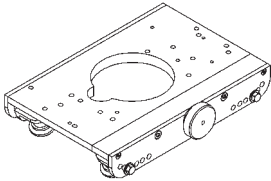
RELEASABLE CARRIAGE

For Rigid & Semi-Flex Rail
MPD-1065



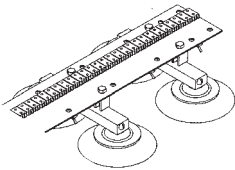
HI-FLEX CARRIAGE

For Hi-Flex Rail
FMD-1105



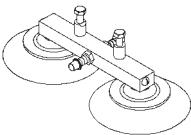
SPLIT CARRIAGE

Releasable from Carriage
For Bent Rigid Rail
BUG-5910



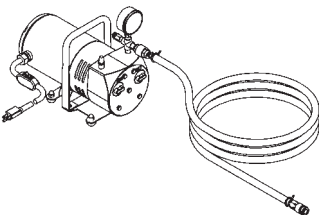
VACUUM BAR ASSEMBLY

For non-ferrous material
For Hi-Flex Rail
(sold separately)
FMD-1036



VACUUM BAR ASSEMBLY

For non-ferrous material
For Rigid & Semi-Flex Rails
(sold separately)
ARV-1036



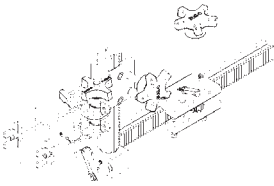
VACUUM PUMP KIT

ARV-2020
110 volt/50-60 Hz

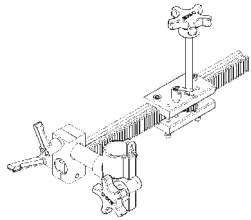
ARV-2030
220 volt/50-60 Hz



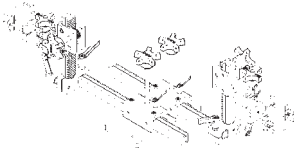
Supports & Accessories



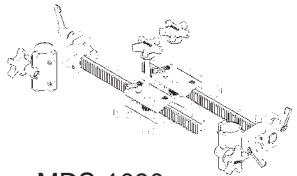
MDS-1040
Machined Rack
Welding Group



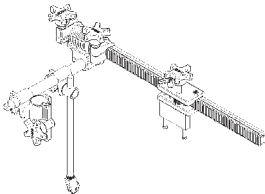
MDS-1050
Machined Rack
Cutting Group



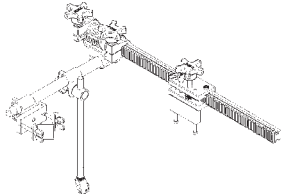
MDS-1075
Dual Torch Welding
Group



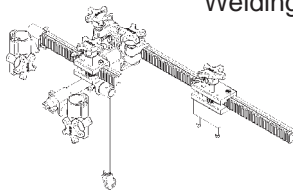
MDS-1090
Dual Torch Cutting
Group



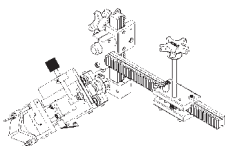
PAN-1000
Panograph
Torch Floater



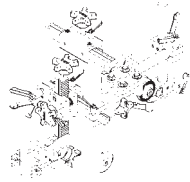
PAN-1008
Welding Panograph



PAN-1072
Double Torch
Panograph



PAN-2145-L, R
Mechanical Corner
Follower



PAN-2160
Mechanical Seam
Follower



Hole & Circle Cutters and Welders



HOB-O ALL-POSITION HOLE BORER

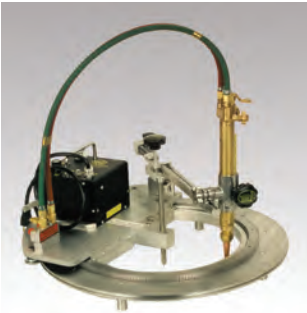
Lightweight precision hole borer, beveler and welder.

120, 240 and 42 volt

Cutting Diameter:

1"-48" (25-1220 mm)

Weight: 30 lbs. (13.6 kg)



CIR-O

Precision circle burner, beveler and welder.

120, 240 and 42 volt

CIR-O III

Cutting Diameter:

3"-56" (75-1422 mm)

Weight: 106 lbs. (48 kg)

CIR-O IV

Cutting Diameter:

3"-64" (75-1626 mm)

Weight: 143 lbs. (65 kg)

CIR-O V

Cutting Diameter:

3"-72" (75-1830 mm)

Weight: 198 lbs. (90 kg)



CIRCLE WELDERS

Nozzle welding units

Available for MIG/MAG

and submerged Arc.

Multiple versions available

for nozzle diameters of

1"-50" (25-1270 mm)

For multi-pass and

multi-layer welding.



Circle Cutters



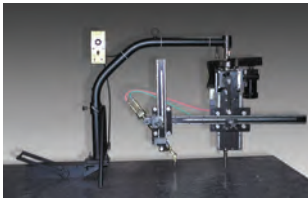
CB-1PR

Plasma circle burner with remote control for cutting beveled holes 1/2"-12" (13-305 mm) in Pipe up to 3/8" (7 mm) wall thickness includes plasma power source.

60% Duty cycle
Rise and Fall Cam:
5" (127 mm)

Speed: 0.2-11 rpm

Weight: 170 lbs. (77 kg)



CB-2

Circle burner with magnetic base
process: Oxy-fuel

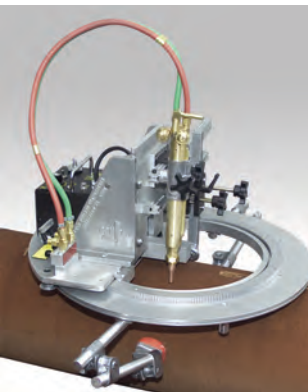
Cutting Diameter:

1.5"-42" (40-1066 mm)
beveled holes

4"-48" (100-1220 mm)
square cut

Rise and Fall Cam:
0-7" (0-175 mm),

Weight: 225 lbs. (102 kg)



CON-O

Precision contour saddle
cutter

120, 240 and 42 volt

CON-O III

Cutting Diameter:

3"-14" (10-1000 mm),

Weight: 83 lbs (37.6 kg)

CON-O IV

Cutting Diameter:

10"-22" (23-1000 mm)

Weight: 98 lbs. (44.5 kg)

CON-O V

Cutting Diameter:

18"-30" (32-1050 mm)

Weight: 130 lbs. (59 kg)



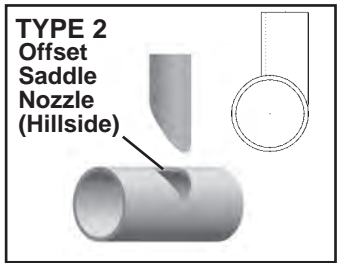
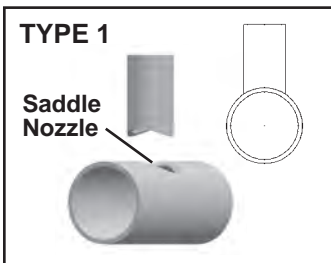
Programmable Circle Cutters & Welders for Offset Nozzles

All Circle Cutters and Welders are Available in Programmable Versions.

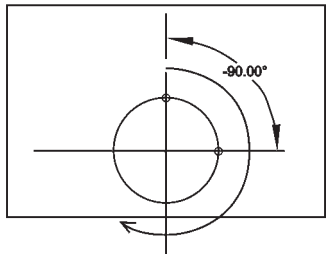
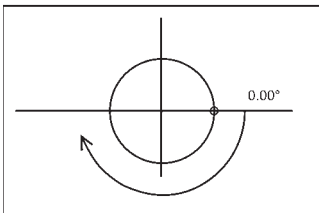


DATA REQUIRED FOR PROGRAM:

1. Small diameter (nozzle size)
2. Large diameter (main pipe)

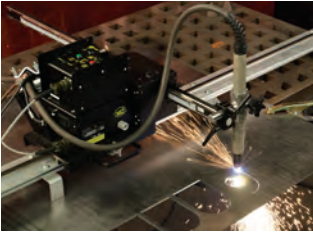


3. Offset distance between centerlines of main pipe and nozzle, if any
4. Overlap Angle (additional rotation after 1 or more complete passes)
5. Start Angle : to specify the start point angle around the joint





Shape Cutting & Gouging



MDS PROGRAMMABLE SHAPE KIT

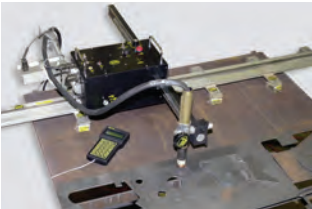
MDS-4500

2 axis portable programmable cutting machine.

120, 240 and 42 volt

Speed: 5-100 ipm
(127-2540 mm/min)

Net Weight: 47 lbs. (21 kg)



PROGRAMMABLE SHAPE MACHINE

2 axis portable programmable cutting and welding machine

120, 240 and 42 volt

Speed: 2.5-50 ipm
(63-1250 mm/min)

Net Weight: 37 lbs. (17 kg)



PROGRAMMABLE GANTRY SYSTEM

2 axis cutting machine

Process: Oxy-fuel or Plasma

120 or 240 volt

Available in 97" (2451 mm)

120" (3048 mm)

143" (3632 mm) widths

Speed: 4-80 ipm

(100-2000 mm/min)



AUTOMATIC GOUGING SYSTEM

Suited for long seams or out of position work

120 or 240 volt

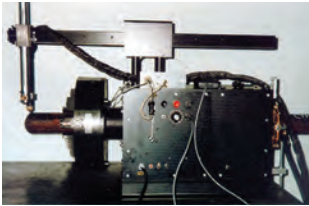
Speed: 2-120 ipm

(5-304 cm/min)

Net Weight: 95 lbs. (43 kg)



Pipe Cutting & End Preparation Units



SE-2 PTD

Programmable pipe cutter with pipe pass through capability

Process: Oxy-fuel or Plasma
120 or 220 volts

Diameters:

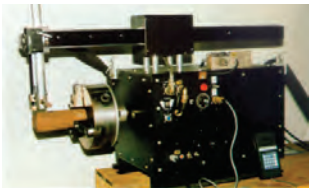
1" - 4" (25-100 mm)

External Chuck:

4"-14" (100-355 mm)

Net Weight:

346 lbs. (157 kg)



SE-4PD

Programmable pipe cutter

Process: Oxy-fuel or Plasma
115 or 220 volts

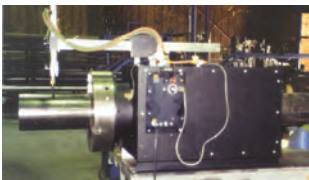
Cutting Diameters:

1"-12" (25-300 mm)

Maximum Pipe Length:

18" (450 mm)

Weight: 201 lbs. (91 kg)



SE-4PTD

Programmable pipe cutter with pipe pass through capability

Process: Oxy-fuel or Plasma
120 or 220 volts

Pass Through Pipe Cutting
Diameters:

4" to 12-3/4"

(100-325 mm)

External Chuck up to

20" (500 mm)

Weight: 705 lbs. (320 kg)



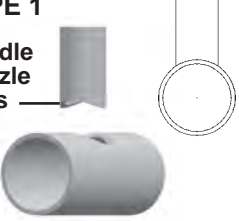

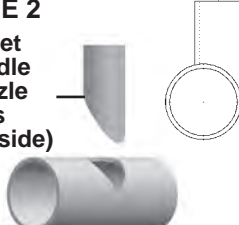

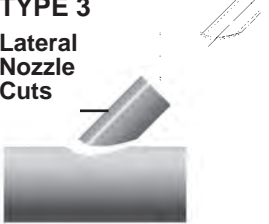

Pipe Cutting & End Preparation Units



MM1

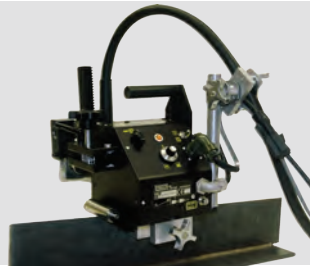
Programmable pipe cutter with pipe bed
 Process: Oxy-fuel or Plasma
 120 or 220 volts
 Cutting Diameters
 4"-16" (100-400 mm) O.D.
 Pipe Length Capacity
 up to 30' (9.14 m)
 24" (600 mm) Diameter
 Capacity Available

Capabilities of Bug-O Pipe cutting & end preparation units. Pre-programmed and custom cuts.

<p>TYPE 1</p> <p>Saddle Nozzle Cuts</p> 	<p>TYPE 4</p> <p>Miter Cut</p> 
<p>TYPE 2</p> <p>Offset Saddle Nozzle Cuts (Hillside)</p> 	<p>TYPE 5</p> <p>Hole Cutting at Various Angles</p> 
<p>TYPE 3</p> <p>Lateral Nozzle Cuts</p> 	<p>Shape Program Custom Irregular Shapes</p> 



Trackless Mechanization for Cutting & Welding



UNI-BUG II

Versatile welding or cutting machine. Runs directly on the work piece. Carriage options for the following

structural profiles:

- Bulb Angle
- T Profiles • L Profiles

110, 220 or 42 volt

Speed: 4-75 ipm

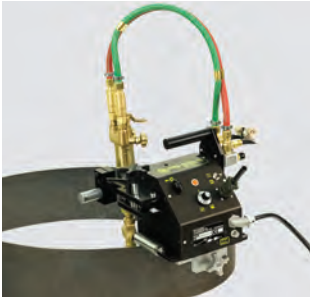
(102-1905 mm/min)

Weight (With Welding

Kit): 19 lbs. (8.64 kg)

Weight (With Cutting

Group): 20 lbs. (9.09 kg)



UNI-BUG III

Programmable stitch welder. Runs directly on the work piece. Carriage options for the following

structural profiles:

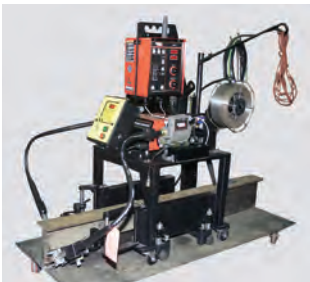
- Bulb Angle
- T Profiles • L Profiles

110, 220 or 42 volt

Speed: 4-75 ipm

(102-1905 mm/min)

Weight: 18 lbs. (8.2 kg)



(Shown with LN10)

STIFFENER WELDER

Dual sided fillet welder with wire feeders and programmable stitch function. Drives off stiffener. 120 or 240 volt

Stiffener Capacities:

4"-18" (102-457 mm) High

4"-12" (102-305 mm) Wide

Speed: 0-36 ipm

(0-900 mm/min)

Weight: 250 lbs. (113 kg)



Trackless Mechanization for Cutting & Welding



(Shown with LN9F)

STIFFENER WELDER

Dual sided fillet welder with wire feeders and programmable stitch function. Drives off base material.

120 or 240 volt

Speed: 3-44 ipm

(7.6-111.7 cm/min)

Weight: 264 lbs. (120 kg)
w/ feeders and reels,
w/o welding wire



Compact Rail Mounted Tractors with Wireless Remote Control



K-BUG 6000

Digital, compact, all position linear weave welder

Rigid rail kit

Includes wireless remote
120 or 240 volt

Speed: 0 to 108 in/min

(0-477 cm/min)

Weight: 21.5lbs. (9.75 kg.)



K-BUG 6100

Digital, compact, all position linear weave welder

Hi-Flex rail kit

Includes wireless remote
120 or 240 volt

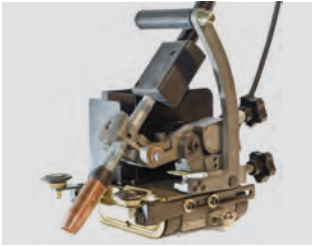
Speed: 0 to 188 in/min

(0-477 cm/min)

Weight: 21.5 lbs.
(9.75 kg.)



Four Wheel Drive Trackless Mechanization for Fillet Welding



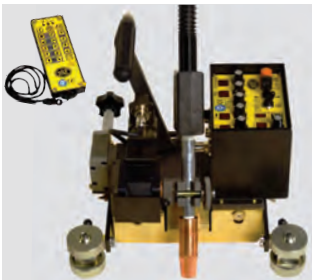
K-BUG 1200

Fillet welder with
continuous and
programmable stitch
42, 120 or 240 volt
Speed: 0.3-.37 in/min
(0.1-95 cm/min)
Weight: 13 lbs. (5.9 kg)



K-BUG 2000

Dual Torch Fillet Welder
120 or 240 volt
Speed: 0.3-37 in/min
(0.1-95 cm/min)
Weight: 23.2 lbs. (10.5 kg)



K-BUG 3000 WITH OSCILLATION

Welds in all Positions
Includes wireless remote
120 or 240 volt
Speed: 1.18-35 in/min
(3.0-88 cm/min)
Weight: 20.2 lbs. (9.2 kg)



K-BUG 4000

Wall following continuous
and stitch fillet welder
120 or 240 volt
Speed: 0-77 in/min
(0-196 cm/min)
Weight: 17 lbs. (7.5 kg)



Girth Welders



UNIVERSAL GIRTH WELDERS

These girth welders are convertible for both bottom up and top down construction. They are also capable of being used as a pair to construct a dual sided girth welder.

Special models can be built per customer's request.



VERTICAL SEAM WELDER

Similar design to BGW. Performs vertical seam welds. Includes elevating platform for operator.

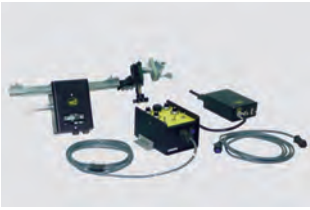


MINI PORTABLE AUTOMATIC GIRTH WELDER

Produces 2G horizontal sub-arc welds. Runs on a steel band support located anywhere on the work piece.

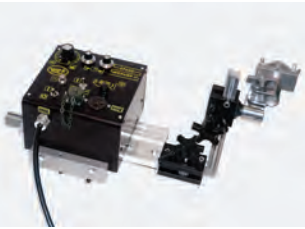


Bug-O Weavers



STAND ALONE LINEAR OR PENDULUM WEAVING KIT

Compact, lightweight
oscillating weld weavers
42, 120 or 240 volt



SPEED WEAVER II

Compact, precision,
all-position machine,
designed for maximum
versatility in oscillation
42, 120 or 240 volt
Speed: 6 to 150 ipm
(152-3810 mm/m)
Weight: 19 lbs. (8.6 kg)



KBUG-5050

Digital, compact
pendulum weave welder
120 or 240 volt
Speed: 0 to 247 in/min
(6274 cm/min)
Weight: 10 lbs. (4.5 kg)



KBUG-6050

Digital, compact
pendulum weave welder
120 or 240 volt
Speed: 0 to 188 in/min
(477 cm/min)
Weight: 14 lbs. (6.3 kg)



Bug-O/Magswitch Magnets and Accessories



WELDING CLAMPS

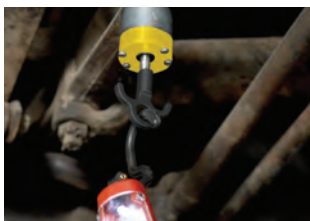
Switchable magnetic welding clamps allow for quick setup.
Ground Clamps Available
Include: 200, 300 and 600 amp.



MAGSQUARES

Multiplane work holding when positioning steel.

Breakaway Weights
(on 1/4" thick steel):
150 lbs. (68 kg)
400 lbs. (182 kg)
600 lbs. (273 kg)
1000 lbs. (455 kg)



HANGING HOOK

Hang tools, lights, welding lines and more.
Max. Safety Rated Hold:
25 lb (11 kg)
90 lb (42 kg)
Breakaway weight:
90 lb (42 kg)
250 lb (114 kg)

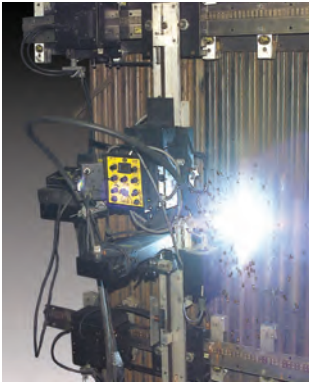


HEAVY-DUTY LIFTERS

Pick up and move heavy, cumbersome objects with ease.
Safe Lifting wt./rtg. on 1/4":
600/440 lbs. (218/155 kg)
900/600 lbs. (327/200 kg)



Custom Application Solutions

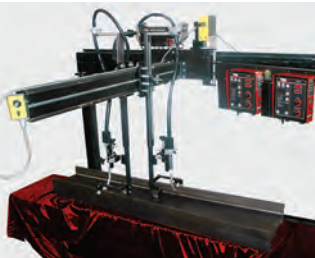


OVERLAY SYSTEM

Custom configured system for rebuilding and resurfacing material such as vessel walls and boiler tubes.

110, 220 or 42 volt
Travel Speed: 2-120 ipm,
(50-3000 mm)

Available in programmable or manual indexing versions and working envelopes



BUG-O GANTRY SIDE BEAM CARRIAGE

Custom designed systems for a variety of applications such as seam welding and beam fabrication.



HEAVY DUTY TRACTOR

Integration with wire feeder available.

www.bugo.com

Scan for more information.



A QUALITY PRODUCT FROM BUG-O SYSTEMS

A DIVISION OF WELD TOOLING CORPORATION Litho in U.S.A.

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