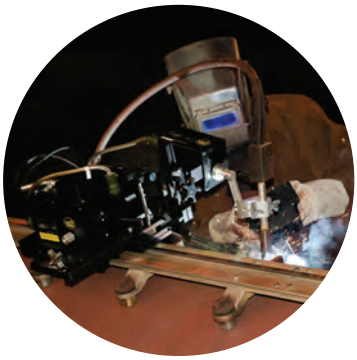
Flexible Automation of Cutting & Welding Applications

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 light-weight machine to the work. Work in all positions.

Reduce Distortion

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

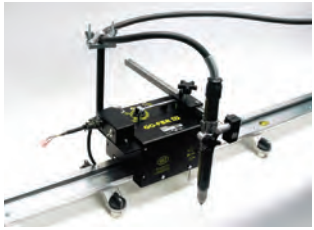
Improve Worker's Environment

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

Adaptable

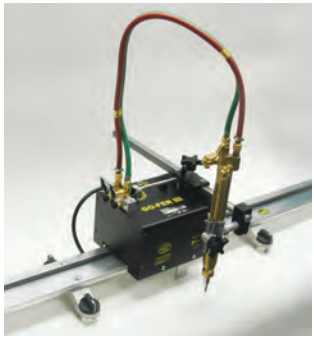
Flexible modular construction that adapts to your job.

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

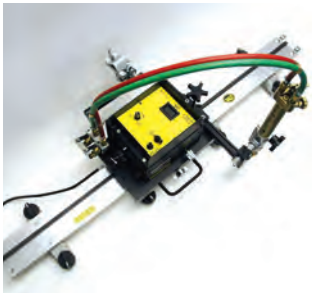
Straight line track burning machine for oxy-fuel or plasma
120, 240 or 42 volt
Speed: 4-72 ipm
(100-1800 mm/min)
Weight: 33 lbs. (15 kg)

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

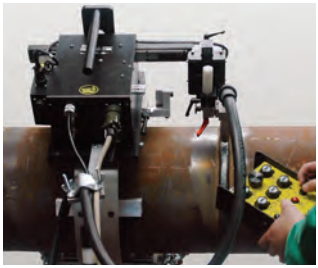
Piper-Bug & Piper-Plus

- 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)

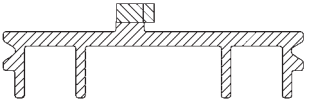
UNIVERSAL BUG-O-MATIC WITH AUTOMATIC HEIGHT CONTROL

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

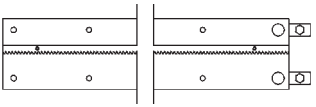
110 or 220 volts
Total Vertical
Adjustment: 25" (635 mm)
Total Horizontal
Adjustment: 25" (635 mm)
Weight: 41 lbs. (19 kg)

Rails

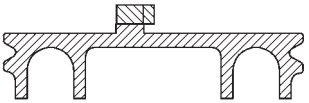


RIGID RAILS

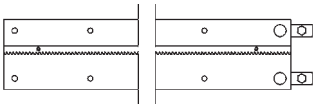
Heavy Duty
ARR-1080
8' (2.37 m) Long sections



ARR-1085
4' (1.18 m) Long sections

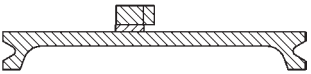


Extra Heavy Duty
ARR-1250
8' (2.37 m) Long sections



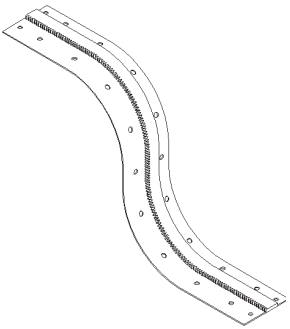
ARR-1200
4' (1.18 m) Long sections

Hard coat rails available upon request for above.



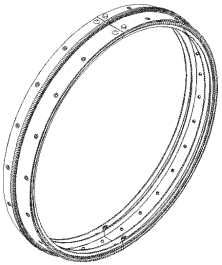
SEMI-FLEX RAIL

Flexes to 15' (5 m) radius
AFR-3000
8' (2.37 m) Long sections



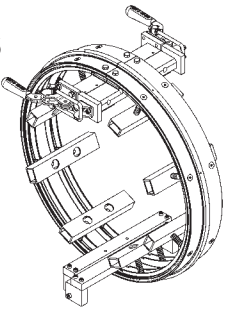
HI-FLEX RAIL

Flexes to 30" (760 mm) Radius
FMD-1050
57.7" (1.47 m) Long sections

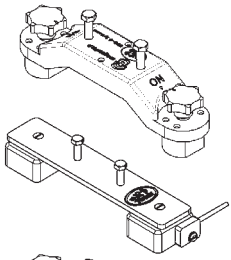


RING RAILS

Minimum work diameter of 9" (230 mm)

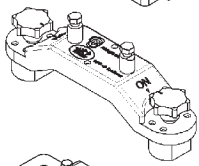


Magnet Bars

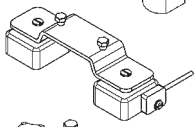


R.E. ON/OFF MAGNET
For Aluminum Rigid Rail
ARM-2010
High Heat Applications*
ARM-2010-HH

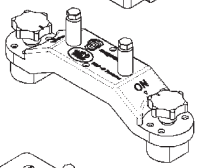
SWIVEL MAGNET
For Aluminum Rigid Rail
ARM-2325



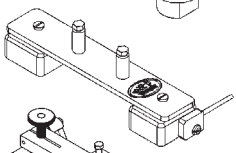
R.E. ON/OFF MAGNET
For Semi-Flex Rail
AFR-2010
High Heat Applications*
AFR-2010-HH



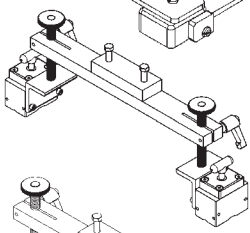
MAGNET W/ RELEASE
For Semi-Flex Rail
ARM-2425



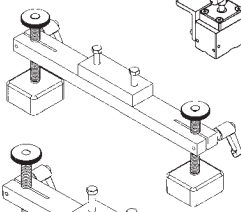
R.E. ON/OFF MAGNET
For Hi-Flex Rail
FMD-2010
High Heat Applications*
FMD-2010-HH



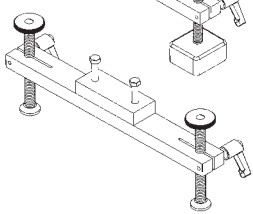
MAGNET W/ RELEASE
For Hi-Flex
FMD-2325



SUPPORT BAR WITH R.E. ON/OFF MAGNETS
For Bent Rail
3.5" (88.9 mm) of adjustment
ARM-2580



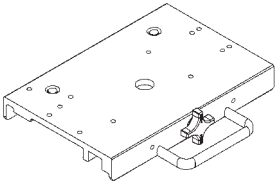
Support Bar w/ Magnets
For Bent Rail
3.5" (88.9 mm) of adjustment
ARM-2480



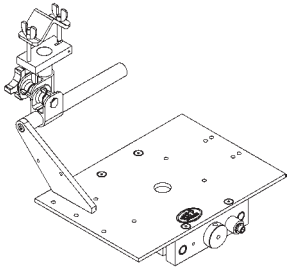
Support Bar w/ Screw Feet
For Bent Rail
4.5" (114.3 mm) of adjustment
ARM-2380

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

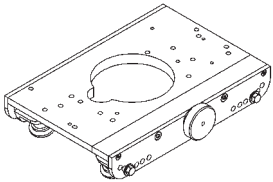
Carriages - Vacuum Support



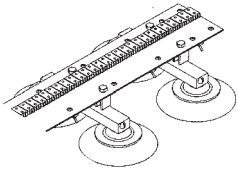
RELEASABLE CARRIAGE
For Rigid & Semi-Flex Rail
MPD-1065



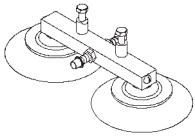
HI-FLEX CARRIAGE
For Hi-Flex Rail
FMD-1105



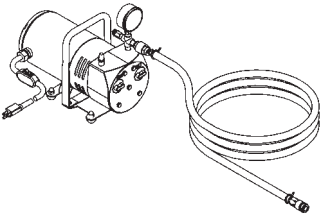
SPLIT CARRIAGE
Releasable from Carriage
For Bent Rigid Rail
BUG-5910



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



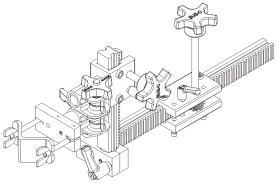
VACUUM BAR ASSEMBLY
For non-ferrous material
For Rigid & Semi-Flex Rails
(sold separately)
ARV-1036



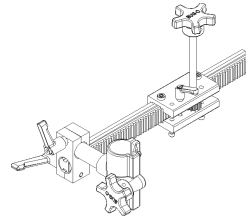
VACUUM PUMP KIT
ARV-2020
110 volt/50-60 Hz

ARV-2030
220 volt/50-60 Hz

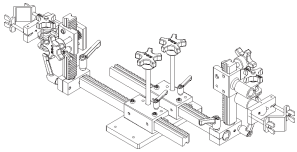
Supports & Accessories



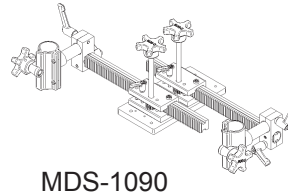
MDS-1040
Machined Rack
Welding Group



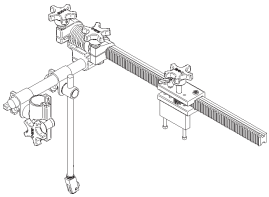
MDS-1050
Machined Rack
Cutting Group



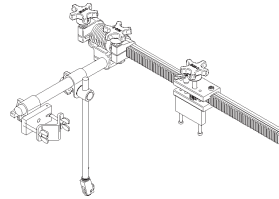
MDS-1075
Dual Torch Welding
Group



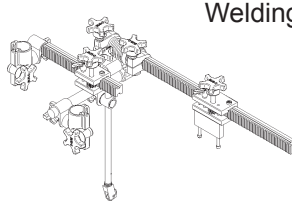
MDS-1090
Dual Torch Cutting
Group



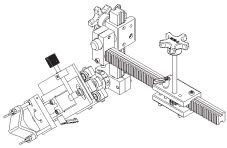
PAN-1000
Panograph
Torch Floater



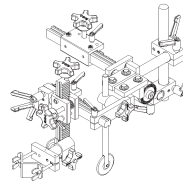
PAN-1008
Welding Panograph



PAN-1072
Double Torch
Panograph



PAN-2145-L, R
Mechanical Corner
Follower

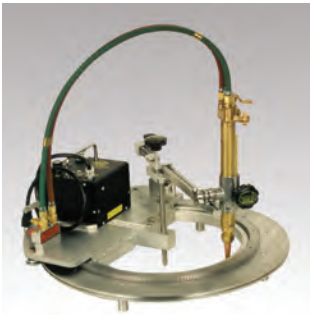


PAN-2160
Mechanical Seam
Follower

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)

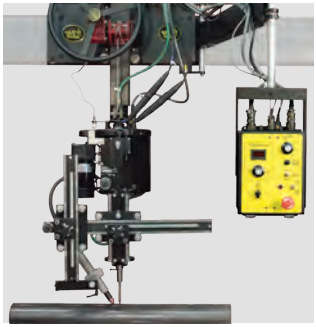
CIR-O V

Cutting Diameter:
3"-72" (75-1830 mm)
Weight: 198 lbs. (90 kg)

CIRCLE WELDERS

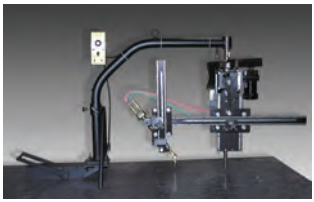
Nozzle welding units
Available for MIG/MAG and submerged Arc.
Multiple versions available for nozzle diameters of 1"-50" (25-1270 mm)
For multi-pass and multi-layer welding.

Circle Cutters



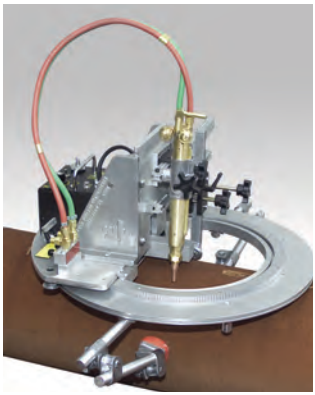
CB-1PR

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

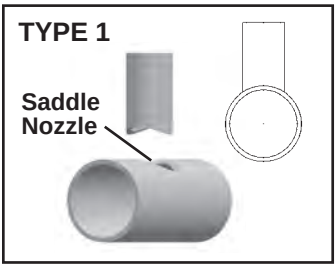
Cutting Diameter:
18"-30" (32-1050 mm)
Weight: 130 lbs. (59 kg)

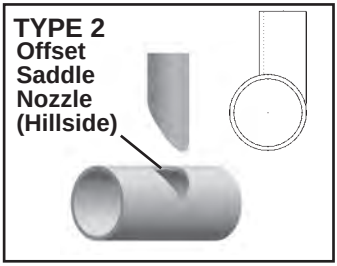
Programmable Circle Cutters & Welders for Offset Nozzles

All Circle Cutters and Welders are Available in Programmable Versions.

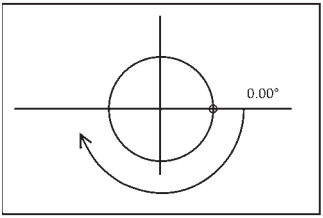
DATA REQUIRED FOR PROGRAM:

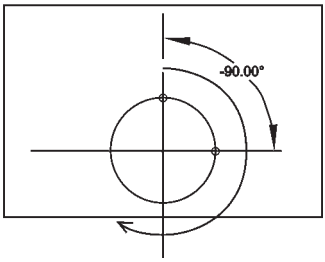
1. Small diameter (nozzle size)
2. Large diameter (main pipe)



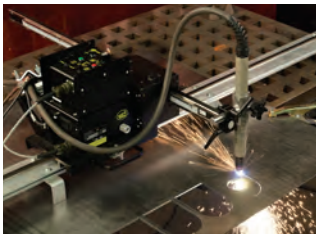


3. Offset distance between centerlines of main pipe and nozzle, if any
4. Overlap Angle (additional rotation after 1 or more complete passes)
5. Start Angle : to specify the start point angle around the joint



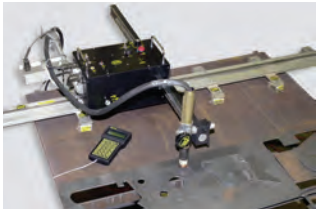


Shape Cutting & Gouging



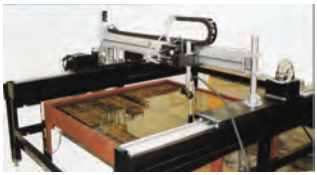
MDS PROGRAMMABLE SHAPE KIT

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)



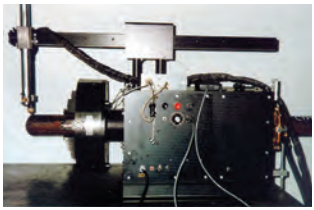
PROGRAMMABLE GANTRY SYSTEM

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

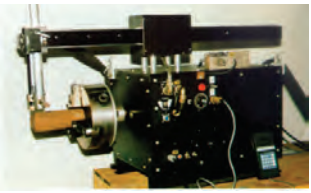
Suited for long seams or out of position work
120 or 240 volt
Speed: 2-120 ipm
(5-304 cm/min)
Net Weight: 95 lbs. (43 kg)

Pipe Cutting & End Preparation Units



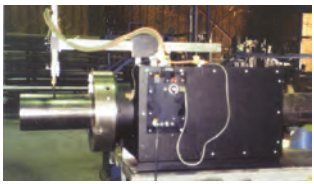
SE-2 PTD

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

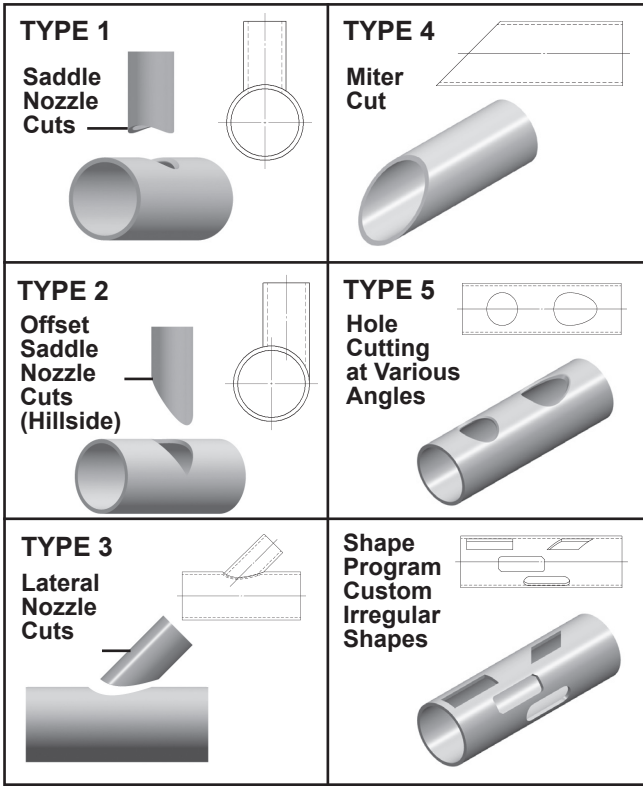
Programmable pipe cutter with pipe pass through capability
Process: Oxy-fuel or Plasma
120 or 220 volts
Pass Through Pipe Cutting Diameters:
4" to 12-3/4"
(100-325 mm)
External Chuck up to
20" (500 mm)
Weight: 705 lbs. (320 kg)

Pipe Cutting & End Preparation Units

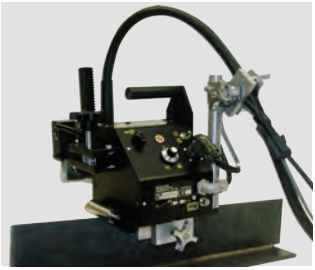
MM1

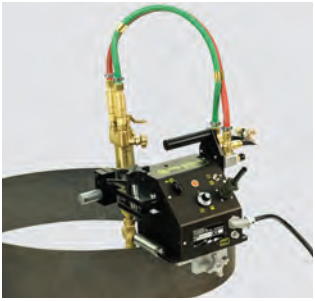
Programmable pipe cutter with pipe bed
Process: Oxy-fuel or Plasma
120 or 220 volts
Cutting Diameters
4"-16" (100-400 mm) O.D.
Pipe Length Capacity
up to 30' (9.14 m)
24" (600 mm) Diameter
Capacity Available

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



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)

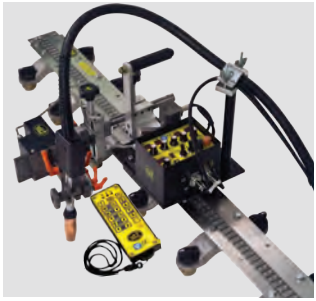
STIFFENER WELDER

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: 21.5 lbs. (9.75 kg.)



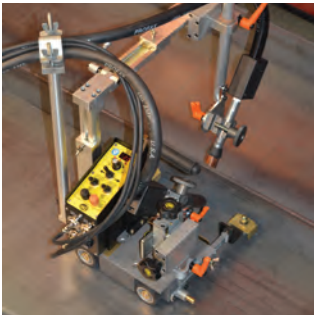
K-BUG 6100

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

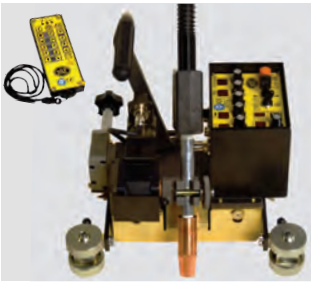
K-BUG 1200

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

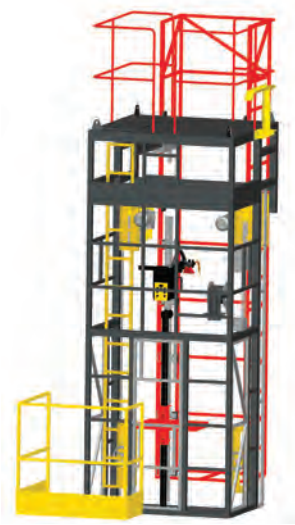
Wall following continuous
and stitch fillet welder
120 or 240 volt
Speed: 0-77 in/min
(0-196 cm/min)
Weight: 17 lbs. (7.5 kg)

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.



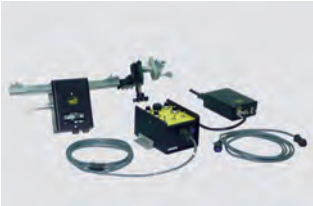
VERTICAL SEAM WELDER

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

MINI PORTABLE AUTOMATIC GIRTH WELDER

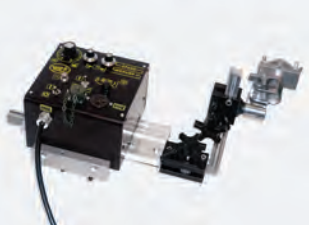
Produces 2G horizontal sub-arc welds. Runs on a steel band support located anywhere on the work piece.

Bug-O Weavers



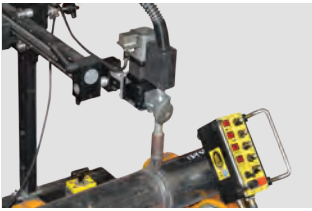
STAND ALONE LINEAR OR PENDULUM WEAVING KIT

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

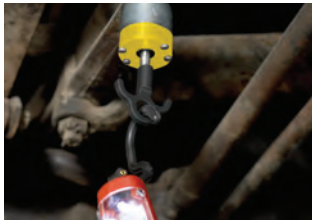
WELDING CLAMPS

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)



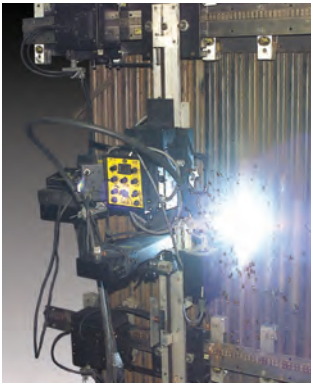
HANGING HOOK

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

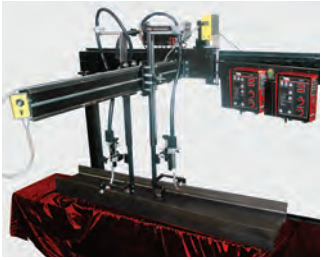
Pick up and move heavy, cumbersome objects with ease.
Safe Lifting wt./rtg. on 1/4":
600/440 lbs. (218/155 kg)
900/600 lbs. (327/200 kg)

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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