Advanced Automated Step Welding System for Bore, Flange, and Valve Repair.

HIGH QUALITY AND PRECISION

Offset head provides torch adjustment without changing the angle of the torch, always providing optimal torch angle, a key parameter for successful borewelding.

Centralized control box gives the operator the ability to make changes to ALL welding parameters while closely monitoring the weld process. Quickly adjust "step" size, rotation speed, rotation direction, wire feed rate, and arc voltage; all from one location. Arc interrupt, contactor control, gas purge and extended utilization of Auto-Skip function are also performed from the control.

Consistent and uniform weld reduces cutting tool wear, reducing cutting time by up to 50%. Infinitely adjustable step allows bead placement from 0.40 - 0.220 inches (1.0 - 5.6 mm).

Wire Feeder choices of shop style or enclosed feeders lets you select the best feeder for the application. The push pull system and wire straightener options allow welding with exotic metals or smaller cast wires.

FLEXIBLE AND VERSATILE

Auto skip feature is perfect for skipping keyways or any square area that needs to be skipped.

Pie mode allows the operator to weld up localized oblong worn sections of bores quickly, saving time and weld material.

Carriage return allows operators to weld uphill or downhill only when in out of position (horizontal) orientation. This one way welding gives operators the ability to weld in a single direction, making control of the process much easier.

Reversible rotation gives the operator the ability to weld in either rotation direction. By reversing direction, the operator can weld up quality bores pass after pass more uniform and evenly.

BB5000 interface kit with spherical connection clamp collar allows quick alignment and attachment of the BW3000, shortening time between welding and boring, allowing the operator to complete jobs faster.

Adjustable mounting base allows mounting of the BW3000 to fit any workpiece when not using a boring bar. The non-magnetic mounting base makes welding in job shops, shop jobs or machine shops simple and easy.

INDUSTRY CHANGING SAFETY AND OPERATOR RISK REDUCTION

Remote feed-control system allows operators to safely control the equipment from one centrally located control while keeping operators out of harm's way, reducing hazards such as burns and dangerous fume inhalation.

Emergency-Stop for immediate shutdown.

Auto-Stop allows the operator to automatically shutdown the machine at the end of the bore.
### SPECIFICATIONS, APPLICATIONS

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Welding Process</strong></td>
<td>MIG (GMAW)</td>
<td></td>
</tr>
<tr>
<td><strong>Axial Travel</strong></td>
<td>6 or 12 inches</td>
<td>152.4 or 304.8 mm</td>
</tr>
<tr>
<td><strong>(longer stroke options available upon request)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step Range</strong></td>
<td>0.040 - 0.220 inches</td>
<td>1.0 - 5.6 mm</td>
</tr>
<tr>
<td><strong>Wire Diameter Range</strong></td>
<td>0.023 - 0.045 inches</td>
<td>0.58 - 1.14 mm</td>
</tr>
<tr>
<td><strong>Amperage Rating</strong></td>
<td>175A Continuous</td>
<td></td>
</tr>
<tr>
<td><strong>Base Package Extension Reach</strong></td>
<td>39 inches</td>
<td>990.6 mm</td>
</tr>
<tr>
<td><strong>Torch Welding Diameter Ranges</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID Bores #00 through #13 &amp; #24</td>
<td>0.88 - 54 inches</td>
<td>22.4 - 1371.6 mm</td>
</tr>
<tr>
<td>OD Torches, max dia.</td>
<td>14, 28 or 56 inches</td>
<td>355.6, 711.2 or 1422.4 mm</td>
</tr>
<tr>
<td>Face Torch</td>
<td>1.0 - 20.0 inches</td>
<td>25.4 - 508.0 mm</td>
</tr>
<tr>
<td><strong>Torch Extensions</strong></td>
<td>3, 6, 12 and 18 inches</td>
<td>76.2, 152.4, 304.8 and 457.2 mm</td>
</tr>
<tr>
<td><strong>Unsupported Torch Reach</strong></td>
<td>60 inches</td>
<td>1524.0 mm</td>
</tr>
<tr>
<td><strong>Control Box Voltages</strong></td>
<td>120 VAC 50/60Hz or 230 VAC 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td><strong>Wire feeder</strong></td>
<td>4-roll drive system accepts standard spools</td>
<td>30 lb spools 13.6 kg spools</td>
</tr>
<tr>
<td><strong>Power Supply Requirements:</strong></td>
<td>Recommended 300 Amp Rating CV power source with remote voltage control capability (power supply not included in BW3000 AutoBoreWelder Package)</td>
<td></td>
</tr>
</tbody>
</table>

### APPLICATIONS

**The BW3000 is widely used by these industries:**
- Mining & Heavy Construction
- Power Generation
- Pulp & Paper
- Shipbuilding

**Typical Applications:**
- Bores, pivot points, buckets and hinges
- Valve and pump repairs
- Gears and gear boxes
- Motor housings and shafts
- Electric motor repair
- Loader bucket & hitch repair
- Nozzles on pressure vessels and heat exchangers
- Compressors and turbines
- Shaft OD repair
- Mud pumps
- Hydraulic cylinder eyes
- Presses
- Castings and injection molds
- Continuous miners and drag lines
- Rotary crushers
- Jaw crusher pitman arms
- Whole tree chippers
- Rudder Bore
- Stern Tube
- Diveter Vane

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**Weights and Dimensions**

Weights and Dimensions vary for each package. Final weights will be determined at the time of your order;

**Standard BW3000 is shipped in 3 boxes:**
(Weights and Dimensions are approximate)

<table>
<thead>
<tr>
<th>Box #1</th>
<th>8 x 16 x 19 Inches (203 x 407 x 483 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight:</td>
<td>21 Lbs (9.53 kg)</td>
</tr>
<tr>
<td>Box #2</td>
<td>9 x 18 x 21 (229 x 457 x 533 mm)</td>
</tr>
<tr>
<td>Weight:</td>
<td>27 Lbs (12.25 kg)</td>
</tr>
<tr>
<td>Box #3</td>
<td>20 x 30 x 13 Inches (508 x 762 x 330 mm)</td>
</tr>
<tr>
<td>Weight:</td>
<td>106 Lbs (48 kg)</td>
</tr>
</tbody>
</table>

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All dimensions should be considered reference. Contact your Climax Representative for precision dimensions. Specifications are subject to change without notice.
Configure your BW3000 in 5 easy steps.

To configure your BW3000 Boring Machine:
1. Select Base Package
2. Select Control Box
3. Select Wire Feeder
4. Select Control Cable
5. Select Mounting Option

To configure the boring machine you require, simply select the option you need in each step, then contact your Climax representative.

1. **Base Package** - Includes support rod, gas hose, positive weld cable, clamp collar, extensions 3, 6, 12 and 18 inch (76.2, 152.4, 204.8 and 457.2 mm) tool kit, consumables starter kit, weld head, 5 foot (1.5 m) conduit, torches #00 to #5, .88 to 13 inches (22.4 to 330.2 mm), 8 foot (2.4 m) control cable
   - Machine Stroke, 6 inches (152.4 mm) 85680
   - Machine Stroke, 12 inches (304.8 mm) 85681

2. **Control Box**
   - 120V Controller 70462
   - 230V Controller 70463

3. **Wire Feeder, Push/Pull Ready**
   - Wire Feeder, Shop Style, 24 VAC
     - Accepts wire straightener option 65054
     - Does not accept wire straightener option 66946
   - Wire Feeder, Enclosed, 24 VAC
     - Accepts wire straightener option 66946

4. **Power Supply Cables**
   - (Additional cables available on request)
     - Miller 14 PIN Control Cable 25 foot (7.6 m) 53249
     - Lincoln Control Cable 25 foot (7.6 m) 53991

5. **Mounting Options**
   - Adjustable Base (includes 5 inch (127 mm) radial mount) 29037
   - Adapter Kit to BB3000 1-1/4 inch (31.8 mm) Bar 26795
   - Adapter Kit to BB4500 1-3/4 inch (44.5 mm) Bar 43731
   - Adapter Kit to BB5000 2-1/4 inch (57.2 mm) Bar 26518
## ACCESSORIES, WELD RANGE INFORMATION

### Mounting Options
- **Tool Alignment for BB3000 1-1/4 inch (31.8 mm) Bar:** 26656
- **Tool Alignment for BB4500 1-3/4 inch (44.5 mm) Bar:** 36062
- **Tool Alignment for BB5000 2-1/4 inch (57.2 mm) Bar:** 26487
- **Radial Mount 5 inch (127.0 mm), Radius Standard Spacer:** 28208
- **Radial Mount 10 inch (254.0 mm), Radius Spacer:** 35006
- **Mounting Rod Extender:** 30831

### Wire Feed Accessories
- **Top Mount Feeder:** 64288
- **Wire Straightener:** 35357
  - Compatible only with shop style wire feeder

### Torches (#6 - #12 Torches Require Counterbalance)
- **#6 Torch, 12 - 15 inch (304.8 - 381.0 mm) Dia.:** 30345
- **#7 Torch, 14 - 17 inch (355.6 - 431.8 mm) Dia.:** 31792
- **#8 Torch, 16 - 19 inch (406.4 - 482.6 mm) Dia.:** 30346
- **#9 Torch, 18 - 21 inch (457.2 - 533.4 mm) Dia.:** 30710
- **#10 Torch, 20 - 23 inch (508.0 - 584.2 mm) Dia.:** 30711
- **#11 Torch, 22 - 25 inch (558.8 - 635.0 mm) Dia.:** 30712
- **#12 Torch, 24 - 27 inch (609.6 - 685.8 mm) Dia.:** 30713

### Torch Systems and Accessories
- **Torch Kit, #00 - #5, 0.88 - 13 inch (22.4 - 330.2 mm) Dia.:** 69896
- **Torch & Bearing Clearance Kit, #00 to #5:** 70197
  - 0.88 - 27 inch (22.4 - 685.8 mm) Dia.
- **Torch Kit #13 - #24, 26 - 54 inch (660.4 - 1371.6 mm) Dia.:** 70196
  - Includes slow rotation belt and pulley
- **Torch Bearing Clearance Kit:** 63916
  - 12 - 27 inch (304.8 - 685.8 mm) Dia.
- **Trammel OD Torch Package:** 27013
  - up to 14 inch (355.6 mm) Dia.
- **Trammel Torch 28 inch (711.2 mm) - Maximum OD Capability:** 38506
- **Extended Trammel Torch Dia. to 56 OD:** 53004
- **Face Torch 8 inch (203.2 mm):** 28186

### Additional Consumables
- **Welding Tip #00, SPEZ Feed 0.045 inch (1.2 mm):** 69554
- **Welding Tip #00, 0.035 inch (0.9 mm) *:** 69521
- **Welding Tip #00, 0.035 inch (0.9 mm):** 69891
  - Chromium/Zirconium
- **Welding Tip #00, SPEZ Feed 0.045 inch (1.2 mm):** 69555
- **Welding Tip #0, Standard 0.035 inch (0.9 mm) *:** 69520
- **Welding Tip #0, Standard 0.035 inch (0.9 mm):** 70204
  - Chromium/Zirconium
- **Welding Tip, 0.035 inch (0.9 mm) *:** 69865
- **Welding Tip, 0.045 inch (1.2 mm):** 70149
- **Diffusers *:** 69778
- **Nozzle #00, Braze On *:** 72974
- **Nozzle #0, Braze On *:** 36531
- **Nozzle, Screw On:** 69866

* INCLUDED IN BASE PACKAGE
CLIMAX has been teaching the fundamentals and fine points of portable machine tool operation for practically as long as we’ve been inventing and building the tools.

We offer training facilities in the United States - the Global Learning Center, situated in our corporate headquarters near Portland, Oregon and our Deer Park, Texas Training Facility. Both facilities offer training for machine tool operators on safety and machine setup and operation. Trainees also receive technical tips and tools to improve operational efficiencies, with the vast majority of every program devoted to hands-on activities and skill development.

The CLIMAX instructional team includes specialists in shipbuilding, power generation, civil engineering, bridge re-building, petrochemical and other industries.

Whether it’s a regularly scheduled course at one of our training facilities, or custom curriculum conducted at your facility, your machinists will benefit from courses developed by some of the most respected authorities in the business.

Call us today to register for a regularly scheduled class, or talk to us about how we can customize a training program for your specialized application.
Call CLIMAX for:

**Rentals**
With 21 worldwide rental depot locations, you are never far away from a CLIMAX tool.

**On-site Training**
Need some refresher courses in setting up and operating your CLIMAX machine tool?

**Custom Projects**
CLIMAX has been solving complicated machining, welding and valve testing problems for our customers since 1964.

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