SET UP

1. Plug the gun cable camlock connector into either the high or low gun female camlock (A). (The HIGH tap produces about 10 volts, typically used for long pins or heavy gauge material. The LOW produces 5 volts, typically used for light gauge material.)
2. Plug the switch cable into the switch cable socket (B).
3. Plug the ground cable cam lock connector into the ground female camlock (C).

ELECTRICAL REQUIREMENTS

Connect the PBF520 to a 100 amp power supply. (208-230 volts - 60 cycle). The PBF520 unit uses 208-230 volt single phase. To wire to 208-230 volt single phase, the green lead is ground and the white and black leads are power. It is suggested that the unit be permanently wired into a 100 amp disconnect box fitted with 100 amp slow blow fuses. Note: due to inherent inrush current, it is recommended to use the next size gauge wire over codes when possible.

PBF520 AS A BENCH TOOL

To use your work bench as a welding table, set the PBF520 alongside the work bench. Cover the bench top with a copper sheet (.025 inch) which will act as a permanent ground when the duct work is placed on the table top. Attach the ground clamp to the duct work or copper bench top. The Clip Pins will quickly weld every time with no burn marks or wasted pins due to misfires.

WHEEL PBF520 TO THE WORK

Where the duct is too large to put on a bench, snap the ground clamp onto the duct and secure the insulation quickly by welding the Clip Pins inside or outside of the ducts as required. Eliminate the heat mark on the duct by using the simple “heat sink” included on opposite the side of weld.

MAINTENANCE

The PBF520 has been designed and built to withstand rugged shop usage. Constant, trouble-free operation is assured with a minimum of maintenance. The GUN TIP, the GROUND CLAMP and all CABLE CONNECTIONS should be kept clean to maintain a good electrical contact. Wire brush the parts to remove any oxidation or adhesive that may have accumulated during the fastening operation.

INSTALLING CLIP PINS

Clip Pins are welded as easily as ‘A’, ‘B’, ‘C’.

“A”
Position the Clip pin on the Magnetic tip of hand gun.

“B”
Press down through the insulation, twist the gun, pull the trigger. Do not release the trigger until the timer cycle has ended.

“C”
The Clip Pins are permanently welded in position flush with the insulation.

TIMER ADJUSTMENT

The timer dial facing you on the front panel of the unit, determines the duration of the weld cycle. For maximum efficiency of the unit, the weld cycle should be set for the shortest length of time necessary to provide a good weld. An excessive amount of time does not improve the weld. On the contrary, the resulting weld may not be an acceptable one. It is recommended that at the start of a production run, using a given length of pin with a given gauge of metal, the operator take a few moments to determine the minimum timer setting to perform the job and leave the timer at that point.

NOTE: There is a common misconception that the longer the weld time, the stronger the weld. This is not true. It is important that you follow the above instructions for maintaining the minimum weld time.
27268 Chassis
27342 Lexan Shield
17308 Universal Amber Light
17320 Potentiometer
27326 Weld Potentiometer Knob
27264 Side Panel Left
27238 Side Panel Right (Not Shown, Far Side)
27335 Rear Wheel
27213 Female Flush Mount Camlock
27327 Front Panel
27345 Ground Cable Assembly
17309 Power Switch
27316 Red Status Light
27315 Green Status Light
39110 Test Switch
27213 Female Flush Mount Camlock
27343 Socket Cover
17327 Switch Cable Receptacle
27270 Front Caster
27264 Side Panel Right (Not Shown, Far Side)
27238 Side Panel Right (Not Shown, Far Side)
27335 Rear Wheel
27213 Female Flush Mount Camlock
27327 Front Panel
27345 Ground Cable Assembly
17309 Power Switch
27316 Red Status Light
27315 Green Status Light
39110 Test Switch
27213 Female Flush Mount Camlock
27343 Socket Cover
17327 Switch Cable Receptacle
27270 Front Caster
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27238 Side Panel Right (Not Shown, Far Side)
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27327 Front Panel
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17309 Power Switch
27316 Red Status Light
27315 Green Status Light
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27238 Side Panel Right (Not Shown, Far Side)
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27213 Female Flush Mount Camlock
27327 Front Panel
27345 Ground Cable Assembly
27274 Ground Block
17140 Weld Activator
27277 Hi-Volt Terminal Block
27278 Hi-Volt Terminal Block
End Stop

17313 12-Position Terminal Block
27271 Component Mounting Bracket
44091 24V Multi-Tap Transformer
27273 Line Cord w/ Strain Relief
27265 Rear Encl Side Panel - Right
37272 Weld Transformer

27266 Rear Encl Side Panel - Left
27267 Rear Encl Back Panel (Not Shown)
27269 Lower Chassis Cover

TP-9 Welding Tip #27230
Upper Replacement Plate Pkg. #17189
PBF520 WIRING DIAGRAM

NOTES:
1- ALL WIRES ARE 18awg UNLESS OTHERWISE SPECIFIED
2- ---------------- DENOTES 8awg WIRE
3- ---------------- DENOTES 10awg WIRE
4- ☐ = BUTT CONNECTOR
<table>
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<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
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<td>Weld Activator</td>
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<td>17288</td>
<td>Switch Cable Plug</td>
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<td>Wheel - Front Caster</td>
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<td>17308</td>
<td>Universal Amber Light</td>
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<td>Comp Mounting Bracket</td>
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<td>Switch Cable Receptacle</td>
<td>27275</td>
<td>UGW16 Universal Weld Gun 16ft</td>
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<td>27099</td>
<td>Trigger Switch - No Leads</td>
<td>27277</td>
<td>Hi-Volt Terminal Block</td>
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<tr>
<td>27100</td>
<td>Thread Form Screw - 6pk</td>
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<td>Hi-Volt Terminal Block End Stop</td>
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<td>Tapered Adapter</td>
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<td>27102</td>
<td>Spindle Shaft</td>
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<td>Red Status Light</td>
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<td>27103</td>
<td>Gun Body (Rt &amp; Left)</td>
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<td>Weld Potentiometer Knob</td>
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<tr>
<td>27104</td>
<td>Face Plate Nut</td>
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<td>Side Panel - Right</td>
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<td>27213</td>
<td>Female Flush Mount Camlock</td>
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<td>Wheel - Rear</td>
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<tr>
<td>27230</td>
<td>TP-9 Welding Tip</td>
<td>27340</td>
<td>Ground Cable only</td>
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<td>27263</td>
<td>Front Panel</td>
<td>27342</td>
<td>Lexan Shield</td>
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<td>Side Panel - Left</td>
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<td>Socket Cover</td>
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<tr>
<td>27265</td>
<td>Rear Encl Side Panel - Right</td>
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<td>Ground Cable Assembly</td>
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<td>27266</td>
<td>Rear Encl Side Panel - Left</td>
<td>39110</td>
<td>Test Switch</td>
</tr>
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<td>27267</td>
<td>Rear Encl Back Panel</td>
<td>44091</td>
<td>24V Multi-Tap Transformer</td>
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