

# **Proweld™ Equipment**

## **Owner & Maintenance**

### **Manual**

#### **4” Socket**

#### **Bench Welding Tool**

(Widos 3500)



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## **Section I- Safety Precautions**

1. Keep working area clean and tidy.
2. Keep electrical tools away from moisture. Never use in wet environment or humid conditions. Working area should be well illuminated. Keep tools away from chemicals and other corrosive materials.
3. Keep visitors at a safe distance.
4. Ensure the electrical supply is suitable for the machine.
5. The heating element reaches 500° F (260° C). Do not touch the surface and wear safety gloves.
6. Never carry tools by the electric cable. Never unplug by pulling the cable. Keep cables away from oil, heat and sharp edges.
7. Prior to use, check that no components are damaged. Missing and worn-out parts should be replaced immediately. Only use factory parts.
8. Electrical tools not in use should be stored away safely.

## Section II - Machine Operation

### 1) General Tool Information

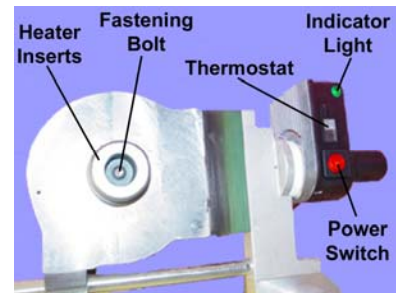
- a. Size Range: 1/2" - 4" (20 mm – 110 mm)  
 Current: 10.8 Amps.  
 Voltage: 110 AC
- b. Additional Technical Data

Pipe/Fitting Material:	HDPE, PP, PVDF
Pipe/Fitting Sizes:	1/2" – 4" (20 mm – 110 mm)
Transport box (LxBxH):	32 x 27 x 33 inches
Weight:	Appr. 240 lbs.
Breaker:	15 Amps
Voltage Requirement:	110 V (+/- 10%)

### 2)

- a. Assemble the tool with the appropriate heater inserts for the pipe size to be welded.

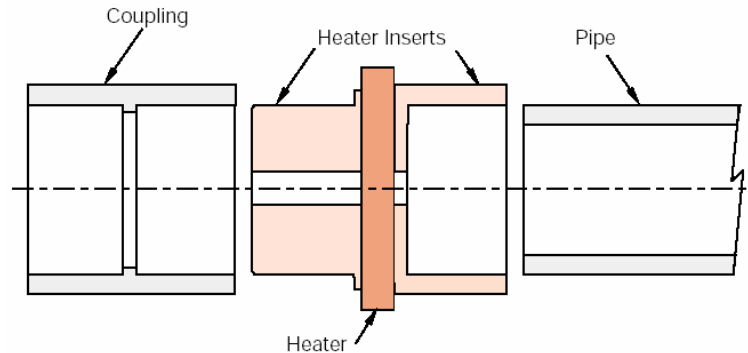
⇒ **Note:** The pair of correct heater inserts (size stamped on side) will be connected by a bolt through the heater plate and into the threaded insert center.



- b. Plug in the heating mirror (110V) and allow time to heat up. Unit temperature is preset at the factory for 500°F.

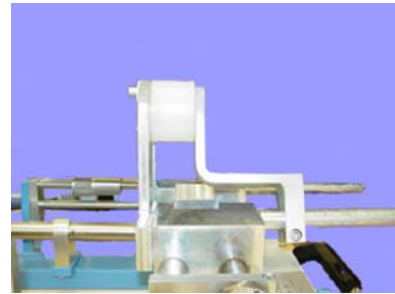
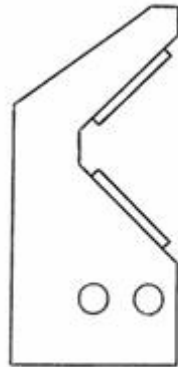
3)

- a. Cut the pipe faces at right angles and remove the burrs with a deburring tool. For sizes 1-1/4" and larger, the ends of the pipe must be chamfered using a scraper tool. Work the pipe face until the blades of the scraper are flush with the pipe end.
- b. Clean the pipe and fitting surfaces with fluffless paper and isopropyl alcohol.
- c. Mark the depth of the socket on the outside of the pipe in order to ensure that the pipe is inserted to the correct depth during heating.
- d. Clean heater inserts and check the unit's temperature.



4)

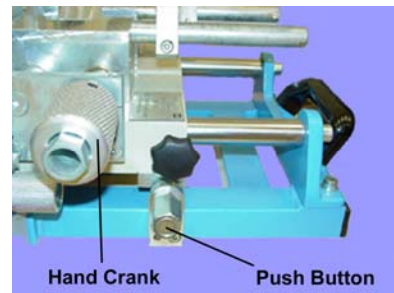
- a. Press the fitting in the right-hand clamping tool to the stop and clamp it tightly.



- b. Open the machine, press the push-button and keep it pressed. Close the machine until it reaches the stop (zero position).

⇒ **Note:** If necessary, secure the position with the help of the lever handle.

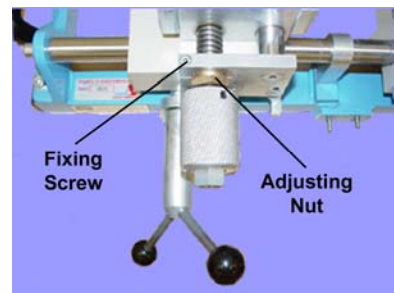
- c. Put in the chamfered pipe so that the end face is adjacent to the fitting.
- d. Clamp the pipe tightly using the hand crank.



5)

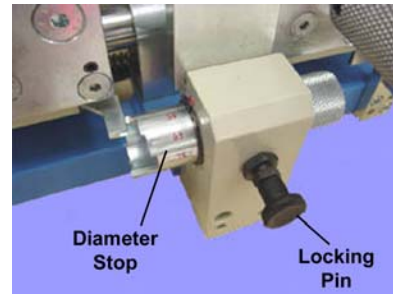
- a. Horizontal adjustments may be made using the adjusting screw. For that purpose, loosen the hexagonal fixing screw (size 5mm) and turn around the adjusting nut (size 32mm) to the right position. Screw down the fixing screw again.

⇒ **Note:** Adjustments should not be necessary. Check the alignment of the pipe and supports.



6)

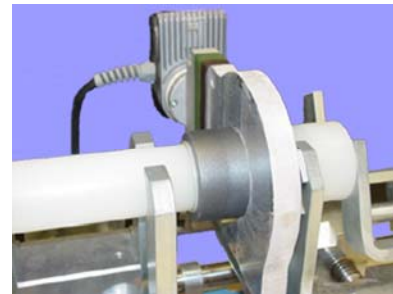
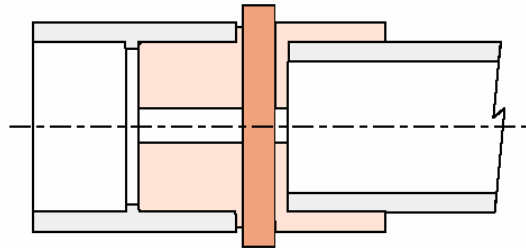
- a. Loosen the turning handle and open the machine.
- b. Set the diameter stop to the diameter to be processed.
- c. Swing in the heating element that has been brought to temperature (flashing control lamp).



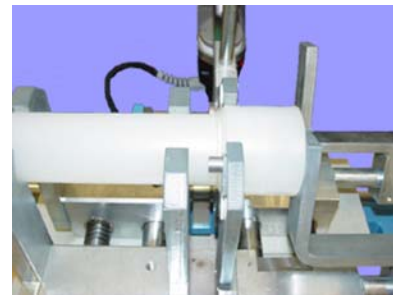
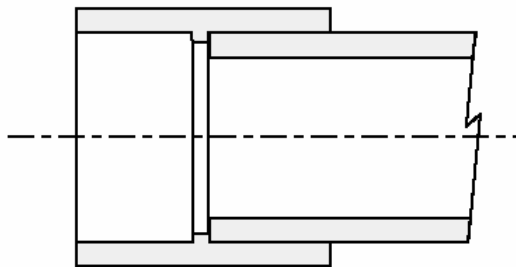
- d. Slowly move the support together by applying steady, smooth force until pipe and fitting are completely inserted (both work pieces are to touch the heating socket / spigot at the same time).

⇒ **Note:** It may be advantageous to start pushing the pipe in before the fitting. (Never twist while heating).

- e. Heat for the indicated time on the chart located on page 8 of the manual.



- f. After heating time is finished, quickly remove pieces from the mirror and fit them together until both welding beads meet. Allow time to cool (see parameters on page 8 of the manual).



## Section III - Bench Socket Welding Parameters

Nominal Pipe Size (inches)	Heat Soak Time (sec)	Adjusting Time (sec)	Cooling Time (min)
<b>Pro 150</b>			
1/2	5	4	2
3/4	7	4	2
1	8	6	4
1-1/4	12	6	4
1-1/2	18	6	4
2	24	8	6
2-1/2	30	8	6
3	40	8	6
4	50	10	8
<b>Air Pro</b>			
1/2	5	4	2
3/4	7	4	2
1	8	6	4
1-1/4	12	6	4
1-1/2	19	6	4
2	24	8	6
2-1/2	30	8	6
3	40	8	6
4	50	10	8
<b>PVDF</b>			
1/2	3	3	3
3/4	4	3	3
1	5	3	3
1-1/4	6	4	4
1-1/2	8	4	5
2	10	5	6
2-1/2	12	5	6
3	15	6	8
4	20	6	10

**Welding Temperatures:**

Pro 150	260°C = 500°F
Air Pro	260°C = 500°F
PVDF	260°C = 500°F

**Note: Must use Purad PVDF 230 PSI pipe for 3" and 4" (90 and 110mm) Purad 230 is SDR21, PN 16 pipe material.**

**Notes:**

**Notes:**

# Tool Department Contacts

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