

# DURO DYNE®

# PORTABLE SPOT WELDER

Duro Dyne has been manufacturing resistance welding equipment for well over 30 years. Its portable spot welders have been in operation in thousands of plants from coast to coast, providing consistent quality spot welding in production environments. Their efficient design provides welding power comparable to many stationary welders much larger in size and costing many times the price. Incorporated into each unit is a light weight solid state timer which ensures consistent welds by eliminating the need for operator judgement. Completely portable, the unit can be *easily* moved.

Operation is simple; a lever handle is depressed, as the handle moves downward the welding tips close against the material to be welded. Upon closure the lever handle contacts a "microswitch." A timed burst of current far in excess of 1000 amperes passes through the metal, heating it to its melting point. Under constant pressure from the arms, the metal fuses together. In most cases, the complete welding process takes a fraction of a second. An optional sheet metal stand with a foot pedal activator is available to free the operator's hands for handling materials. For heavy production usage optional water cooled arms and tips are recommended.

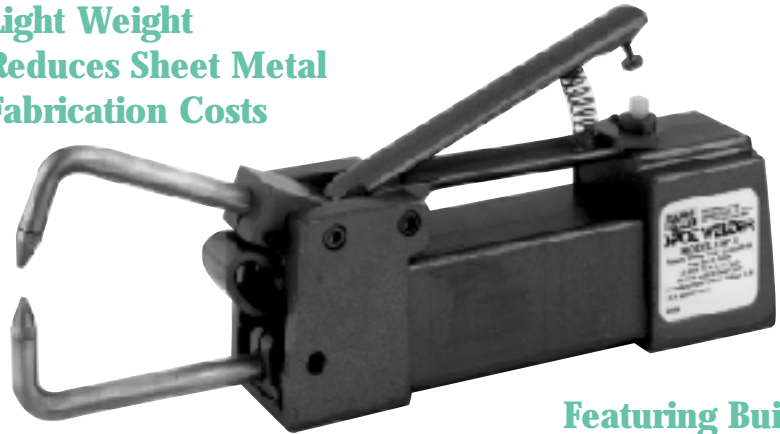
## Tips on Use of Spot Welders

### 1. Welding Galvanized Metals

Because galvanize coating is a relatively poor conductor of electricity, galvanized steel does not weld as readily as uncoated steel.

The following procedure is recommended for welding galvanized steel:

- Low Cost
- Light Weight
- Reduces Sheet Metal Fabrication Costs



## Featuring Built-in Solid State Timer

A. As soon as current is applied, tilt the work so that tips can "bite" into the coating. This will start the weld.

B. Keep switch "on" until the built-in timer times out. The weld will then be complete. In cases of metal that is rusty or heavily scaled, cleaning is necessary before welding.

### 2. Minimizing Burns When Welding

Here is a suggestion on how to minimize burn marks on stainless steel: Place a piece of copper about 1" square over the side of the metal where you do not want a burn mark to appear. Weld the stainless steel through the copper and any burn will be negligible.

For production welding, you may accomplish the same thing by grinding the tip which rests on the finished surface as broad as possible. File the other tip to a fine point and you can perform consistent welds on stainless with negligible burn.

### 3. Getting The Most From Your Welder

To get the most out of your welder it is necessary that the input power is as high as possible. It is, therefore recommended

that the welder be connected directly to, or as close to your fuse box as possible. If an extension cord is needed, be sure to use at least #12 cable for the best results.

### 4. Welding Two Pieces of Wire Together

The Portable Spotwelder will weld two pieces of round wire together. The diameters of the wires which you can weld greatly exceed the thickness capacity listed for the machines. For best results, it is suggested that contour slots be filed into the tips so that they act as a holding jig when welding the wire.

### 5. Versatility

Since welders are basically heat producing devices there are many uses for the units which you never thought possible. It is excellent for heating small metal parts cherry red for hardening. If the thickness of the piece to be hardened, (or annealed), is greater, you may have to re-bend the arms slightly.

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## Quickly Converts to Stationary Unit with Stand

A sturdy sheet metal stand is available which enables you to operate your Portable Spotwelder just as you would operate a stationary unit. Press the foot pedal and the arms clamp together and perform the weld. Release the foot pedal when the weld is complete. This allows the operator two free hands for handling material. The welder

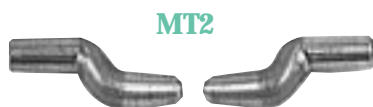
Standard Model No. ST2  
Code No. 9203

slips onto the stand and locks in position. It can easily be removed and operated on a bench when needed.



## Welder Arms & Tips

### Water Cooled Tips



### Standard Tips



STANDARD			WATER COOLED			STANDARD			WATER COOLED		
Length	Desc.	Item#	Length	Desc.	Item#	Length	Desc.	Item#	Length	Desc.	Item#
6"	S-1	9012	12"	S-2-W	9022	6"	A-1	9015	15"	A-2-W	9026
12"	S-2	9013	18"	S-3-W	9023	15"	A-2	9016	18"	A-3-W	9027
18"	S-3	9014				18"	A-3	9017			

## Specifications

CAPACITY	ITEM#	MODEL#	DESCRIPTION	VOLTAGE	KVA AT DUTY CYCLE	
Welds mild or S.S. to 1/8" (combined thickness); galvanized up to two pieces of 18 gauge.	9200	TSP-1	Welder with built-in solid state timer, less arms & tips, includes 10' of line cord.	110V A.C. (50-60 cycle) 25 amp fuse	2.5	7.5%
	9201	TSP-2		220V A.C. (50-60 cycle) 15 amp fuse	2.5	7.5%
HI position: Welds mild or S.S to 1/4" (combined thickness); galvanized to two pieces of 12 gauge. Caution: Model TBW is too powerful to weld light gauges without burning unless the timer is used in IO position. IO position characteristics and capacity are same as Model TSP-2.	9200	TBW (HILO)	Welder with built-in solid state timer, less arms & tips, includes 10' of line cord.	220V A.C. (50-60 cycle) 15 amp fuse	5.0	7.5%
					2.0	50%