Weller Tech Sheet

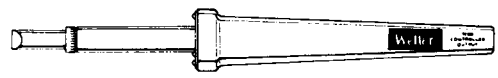
W60-W100 Series

PRODUCT DESCRIPTION

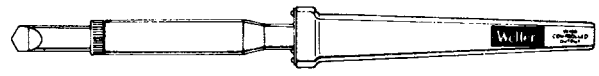
A line voltage high quality portable tool with all the advantages of controlled output and temperature. The special Weller "closed loop" method of controlling maximum tip temperature is employed, thereby protecting temperature sensitive components.

The soldering pencil also features a stainless steel heater construction for greater soldering efficiency, cool blue handle, a large selection of iron plated tips and sizes, for W60 from 1/16" to 1/4" and for W100 from 1/8" to 3/8" and both irons with choice of tip temperature of 600, 700, and 800°F. The W60 irons are provided with a CT5E7 tip (700° 1/4" diameter, screwdriver). The W100 irons are provided with a CT6E7 tip (700° 1/4" diameter screwdriver).

W60, 2 Wire Cord
W60-3, 3 Wire Cord



W100, 2 Wire Cord
W100-3, 3 Wire Cord



Both the W60 and W100 irons are equipped with the cool blue handle. The W60 2 wire and W100 2 wire are U.L. approved. The W60-3 and W100-3 are U.L. and C.S.A. approved.

SPECIFICATIONS

Electrical:

1. Line voltage - 120 Volts, 50/60 Hz
2. Soldering pencil wattage -
   W60, 60 Watts
   W100, 100 Watts
3. Tip voltage * to ground -
   2 wire 15 Volts peak to peak
   3 wire .005 millivolts peak to peak

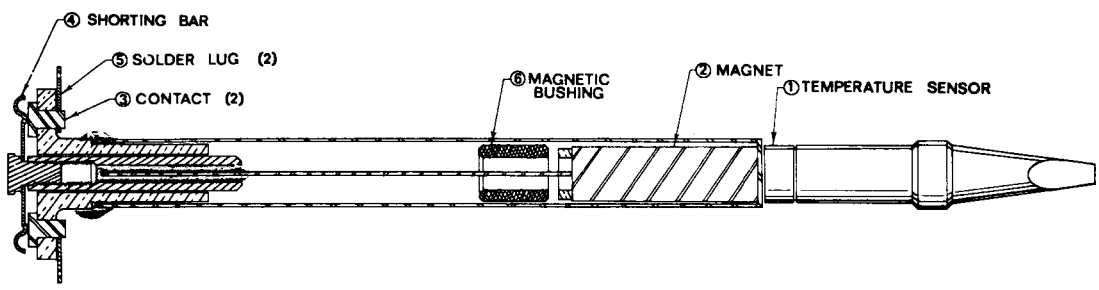
Physical:

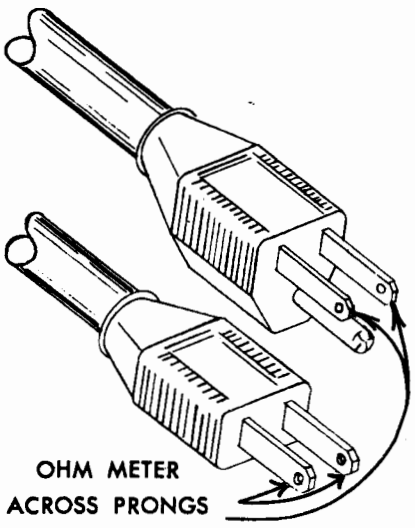
1. Pencil weight -
   W60 without cord 2-1/2 oz.
   W100 without cord 3-1/2 oz.
2. Pencil length -
   W60 less tip 7-1/2"
   W100 less tip 8-1/4"
3. Cord length - Six (6) foot all models.
4. Nominal heat up time
   W60 with CT5E7 — 110 seconds
   W100 with CT6F7 tip — 110 seconds
5. Nominal recovery time from 100°F drop -
   W60 with CT5E7 tip — 16 seconds
   W100 with CT6F7 tip — 40 seconds

*Tip ground connected, voltage measured with Tektronic Type 504 Oscilloscope (1 Meg., 47 pf input)

PRINCIPLE OF OPERATION

When the soldering tip is cold, a ferromagnetic temperature sensor (1) attached to the tip attracts a permanent magnet (2). The magnet movement causes a shorting bar (4) to make contact with a set of isolated electrical contacts (3) thereby supplying power to the heating element through the solder lugs (5). When the tip reaches its rated temperature, the sensor becomes non-magnetic and no longer attracts the magnet. Then a magnetic bushing (6) attracts the magnet causing the shorting bar to break the circuit. In this manner, power to the heating element is turned on and off automatically to compensate for variations in work loads.





TROUBLE SHOOTING GUIDE

CAUTION: Disconnect power supply before attempting any repair.

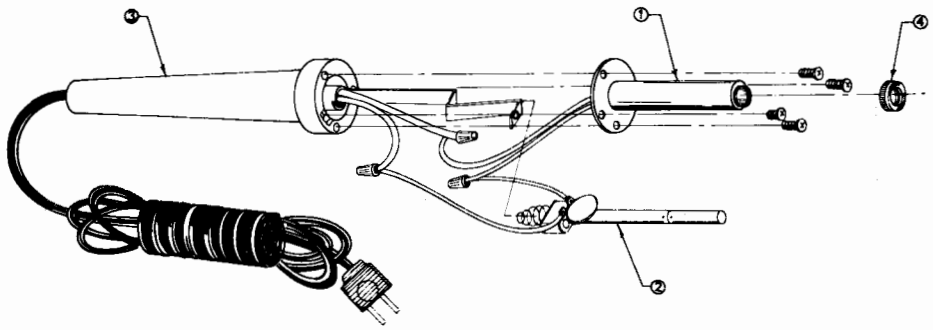
1. Pencil Cold
   Check Power Source
   1. Unplug power cord
   2. Check for 120 volts at power supply receptacle.

Check Pencil For

1. Temperature sensor (fastened to back of tip). Pencil will not heat or may overheat if sensor is missing.
2. Heater element resistance — unplug power unit, disassemble handle from heater element by removing three (3) outer perimeter screws, remove wire nuts from heater leads and measure resistance. For a W60, 213-245 ohms is normal and for a W100, 127-141 ohms is normal. Replace if reading is high or low.
3. Switch operation — remove wire nuts from switch leads and connect ohm meter across switch leads. Measure resistance with tip sensor in contact with switch end and with tip removed. Replace switch if reading of zero (0) ohms and infinite ( ) ohms respectively are not obtained.
4. Power cord — with iron completely assembled and with a tip installed, attach ohm meter across prongs on power cord. If by flexing cord you get an intermittent ohms reading, replace cord set.

WARRANTY

Each Weller tool is tested. A tool failing within 90 days of purchase due to defective workmanship or materials will be repaired or replaced at no charge. Tools failing thru abuse or normal wear will be repaired at a nominal charge plus parts and shipping.



Caution: Capacitor on switch must be opposite ground strap when reassembling

REPAIR PARTS LIST

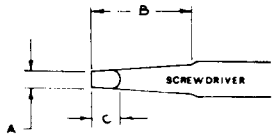
Key No.	Part No.	Description
1	HEW60	Heating element W60, W60-3
	HEW100	Heating element W100, W100-3
2	SW60	Switch assembly W60, W60-3
	SW100	Switch assembly W100, W100-3
3	CS3HB	Cord set, strain relief and handle assy. kit, W60, W100 (2-wire cord)
	CS4HB	Cord set, strain relief and handle assy. kit, W60-3 W100-3 (3-wire cord)
4	KN60A	Knurled tip nut, W60, W60-3
	KN100A	Knurled tip nut, W100, W100-3

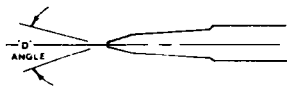
REPLACEMENT PARTS LIST

Part No.	Description
PH60	Soldering tool stand, with base and sponge for W60, W60-3
PH100	Soldering tool stand, with base and sponge for W100, W100-3
SFA60	Side rail stand, for attachment to wall or bench. For Model W60, W60-3
SFA100	Side rail stand, for attachment to wall or bench. For Model W100, W100-3
DS60	Temperature controlled desoldering attachment for Models W60, W60-3 with DST4, .063 orifice tip
SFW60	Funnel only for PH60 stand, SFA60 holder
SFW100	Funnel only for PH100 stand, SFA100 holder
SP60	Sponge for PH60, PH100 stands (10 per pack)

TIP SIZES AVAILABLE

Weller industrial soldering tips have heavy iron plating with anti-oxidation coating.





CT5 Series Tips for W60, Series Irons	Description	Dimension A	B	C	D	Catalog Numbers 600°F	700°F	800°F
	Screwdriver	1/16"	1-5/32"	1/8"	15°	CT5A6	CT5A7	CT5A8
	Screwdriver	3/32"	1-5/32"	1/4"	15°	CT5B6	CT5B7	CT5B8
	Screwdriver	1/8"	1-5/32"	5/16"	15°	CT5C6	CT5C7	CT5C8
	Screwdriver	3/16"	1-5/32"	3/8"	15°	CT5D6	CT5D7	CT5D8
	Screwdriver	1/4"	1-5/32"	7/16"	15°	CT5E6	CT5E7	CT5E8

BULK PACKED, any single tip, lots of 100*. *To order, add "BULK" after part number. Order as lot units (1 — 100 tips, 2 — 200 tips, etc). Order in unit lots (of 100) only.

CT6 Series Tips for W100, Series Irons	Description	Dimension A	B	C	D	Catalog Numbers 600°F	700°F	800°F
	Screwdriver	1/8"	1-3/8"	3/8"	15°	CT6C6	CT6C7	CT6C8
	Screwdriver	3/16"	1-3/8"	3/8"	15°	CT6D6	CT6D7	CT6D8
	Screwdriver	1/4"	1-3/8"	1/2"	15°	CT6E6	CT6E7	CT6E8
	Screwdriver	1/4"	1-3/8"	1/2"	15°	CT6F6	CT6F7	CT6F8

SELECTION OF WELLER CT SERIES TIPS

1. Select a tip configuration with the maximum working surface, thickest cross section and shortest reach compatible with the size, the accessability, and the visual restrictions of the solder joint.
2. Select a tip temperature based on the size of the solder joint, the temperature sensitivity of the components, and the production rate required. Please note that tip life is directly related to tip temperature — the lower the tip temperature, the longer the tip life.
3. Performance is determined by both temperature and configuration. Work satisfactorily soldered with a CT5D7 (700°, 3/16" diameter screwdriver tip) might also be soldered quite successfully with a CT5C8 (800°, 1/8" diameter screwdriver tip).

CAUTION:
These are automatically controlled tools and use of improper metallic stands will affect life of tool and tip. Specifically engineered and recommended PH and SF series stands are listed in this sheet.

CARE OF WELLER CT SERIES TIPS

1. Keep tip tinned; wipe only before using.
2. Use rosin or activated rosin fluxes. Acid type fluxes will greatly reduce tip life.
3. Remove tip and clean w/suitable cleaner for flux used. The frequency of cleaning will depend on the type of work and usage. Tips in constant use should be cleaned at least once a week.
4. Don't try to clean tip with abrasive materials and never file tip, to do so will greatly reduce tip life.
5. Don't remove excess solder from heated tip before storing. The excess solder will prevent oxidation of the wettable surface when tip is reheated.
6. Don't use anti-seize compounds on tips, they have been plated for oxidation protection.

ABOUT WELLER SOLDERING PENCIL TIPS

All Weller CT Series soldering pencil tips have been plated with an exclusive process that deposits three (3) protective coatings. The high conductivity copper tips are iron plated, then nickel plated and finally aluminum plated on non-working surfaces. The working surface is then pre-tinned. The aluminum and nickel plating of the tip prevents oxidation of the iron plating which can cause freezing of the tip in the pencil. The aluminum also prevents solder "creep-up". Weller's temperature-sensing" tips have a small ferromagnetic sensing element attached to the tip shank. The sensing element is coded with a number to indicate idle temperature in hundreds of degrees F. Thus a simple change of tips is all that is necessary to adapt the tool to an entirely different temperature range.