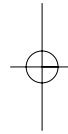
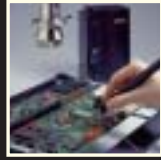


# METCAL

*Precision Systems for the Electronics Bench*

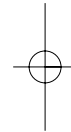
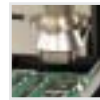
SOLDERING, DESOLDERING AND REWORK SYSTEMS





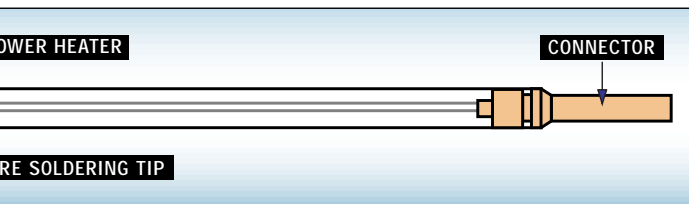
SmartHeat® Technology	0 2
600 Soldering, Desoldering & Rework System	0 4
Soldering Tip Cartridges	0 7
Desoldering Tip Cartridges	1 0
Rework Tip Cartridges	1 1
Speciality Tip Cartridges	1 4
Microfine Rework Tip Cartridges	1 5
Accessories & Spare Parts	1 6
700 Soldering System	1 8
800 Self-Contained Desoldering System	2 0
900 Convection Rework System	2 2
1160 Hot Air Pencil	2 7

Contents





the heater (a copper bar coated with a magnetized iron/nickel alloy  
Curie Point), it stops absorbing energy and the temperature becomes



power supply feeds a steady current to the coil. This creates an electrical  
r absorbs energy, turns it into heat and transfers it to the iron/nickel  
rawn heat from the heater to the extent that the tip begins to cool, the  
more energy in order to reheat the tip. In this way, SmartHeat® self-  
ure to within  $\pm 1.1^{\circ}\text{C}$  of a set point regardless of thermal load and  
ment.

## Replacement

plied with the unit  
and remove the tip  
this process ensures  
activity, no need for  
son for two soldering  
e same time.

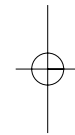


## Route To Lead-Free Hand Soldering

soldering does not necessarily mean that you will have to invest in new  
existing process. As SmartHeat's variable power and fixed temperature  
temperature under a wide variety of thermal loads, the system can easily  
temperatures demanded by lead-free applications without any need for

## Required For Easy ISO 9000 Compliance

r soldering with a SmartHeat® system, simply record the tip cartridge  
's alloy dictates the temperature, calibration is not required. Indeed,  
or calibration tools, typical of other systems, with which you can adjust  
his avoids all risk of unauthorized operator intervention. Throughout the  
ature drift is less than a few degrees. A letter to confirm SmartHeat's  
available on request.





## And Simplicity

ce, characteristic of the Metcal hand-piece, improves process precision.  
lications. The easy-squeeze design of Metcal's Talon® tweezers has been  
uperior performance, unmatched comfort and optimum control.

### MX-500S SMT SOLDERING/REWORK SYSTEM

20 VAC, Solder System

40 VAC, Solder System

able Power Supply with Power Cord\*

iece with Cord

val Pad



### MX-500TS SMT REWORK/TALON® SYSTEM

20 VAC, Solder/Talon® System

40 VAC, Solder/Talon® System

able Power Supply with Power Cord\*

iece with Cord

iece with Cord

val Pad (2)



### TALON® UPGRADE KITS

e Kit

iece with Cord

val Pad

e with Switchbox for Older STSS Systems

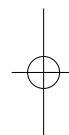
iece with Cord

val Pad

Storage Tray

ately from all systems. \*220/240 VAC systems do not include power cords.

MX-500



page

05





# Soldering Tip Cartridges

are for use with the MX and the STSS soldering/rework hand-pieces only.  
the SP systems, the Talon® or desoldering hand-pieces.

## FREQUENTLY USED TIP CARTRIDGES

### **STTC-X36\*** Chisel 30° .10" (2.5mm)

For medium to heavy load joints requiring extra reach.

### **STTC-X37\*** Chisel 30° .07" (1.78mm)

For a wide variety of tasks. If you are choosing the first tip for your Metcal system, the STTC-037 is ideal.

### **STTC-X38\*** Chisel 30° .06" (1.5mm)

A finer version of the STTC-037. Ideal for medium to light through-hole and general surface mount touch-up.

### **STTC-X25** Chisel 30° .04" (1.0mm)

Good for a variety of light soldering tasks. Looking for a surface mount touch-up tip? The STTC-025 should be your first choice.

### **STTC-X07** Conical Sharp .04" (1.0mm)

General-purpose SMT and through-hole tip when access is limited.

### **STTC-X22** Conical Sharp .016" (0.4mm)

Sharp tip cartridges for soldering SMT components or fine wire applications (not for general through-hole tasks).

### **STTC-X06** Conical Sharp .016" (0.4mm)

For limited access SMT rework.

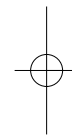
### **STTC-X40** Sharp Bent 30° .016" (0.4mm)

Tip for soldering SMT components. The bend makes it much easier to work on small circuits and PLCCs.

### **STTC-X45** Bevel 60° .016" (0.4mm)

An extended length fine tip for surface mount or fine wire applications (not for general through-hole tasks).

MX Tips



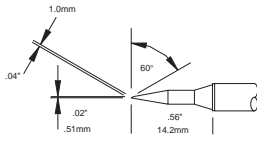
page  
07

ES X=0 700 SERIES X=1 800 SERIES X=8, WHEN FOLLOWED BY AN \*



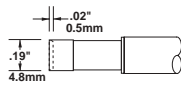
## OTHER STANDARD TIP CARTRIDGES

**STTC-X15**  
Bevel 30°  
.05" (1.3mm)



**STTC-X46**  
Long Reach  
Bevel 60°  
.04" (1.0mm)

**STTC-X24**  
Bevel 30°  
.04" (1.0mm)



**STTC-X70**  
Heat Staking  
.19" (4.8mm)

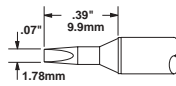
**STTC-X97**  
Grooved Semi-Rigid  
Coax

Series X=0 700 Series X=1 800 Series X=8, WHEN FOLLOWED BY AN \*

## SRTC ROBOTIC TIP CARTRIDGES

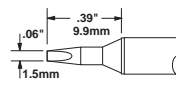
SRTC Cartridges are designed for use with MX-RM5E or MX-RM8E handles only. Similar to STTC tip cartridges, SRTC Cartridges have a shaft length of 3.15" (80mm) and, therefore, are not compatible with the MX-RM5E handle.

**SRTC-X17\***  
Extra Large Chisel  
.20" (5.0mm)



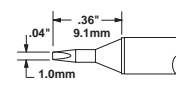
**SRTC-X37**  
Chisel 30°  
.07" (1.78mm)

**SRTC-X13**  
Chisel 90°  
.12" (3.0mm)



**SRTC-X38**  
Chisel 30°  
.06" (1.5mm)

**SRTC-X36**  
Chisel 30°  
.10" (2.5mm)



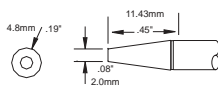
**SRTC-X25**  
Chisel 30°  
.04" (1.0mm)

Series X=7 800 Series X=8, WHEN FOLLOWED BY AN \*

## PTTB BONDING TIP CARTRIDGES

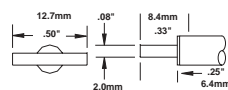
For plastic bonding applications, these aluminum tips can be used with all MX-RM5E or MX-RM8E handles.

**PTTB-501**  
Bonding Tip



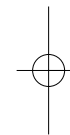
**PTTB-503**  
Bonding Tip

**PTTB-502**  
Bonding Tip



**PTTB-504**  
Bonding Tip

MX Tips



page  
09

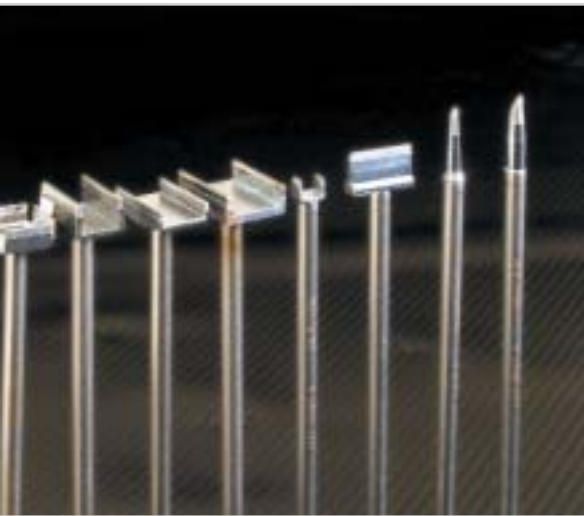


# SMTC

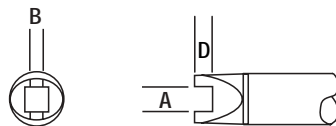
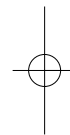
## SMT Rework Tip Cartridges

SMT components, SMTC tip cartridges do it all – assembly, removal and desoldering. The SMTC range also includes slot, tunnel and quad tip cartridges. The SMTC range also includes blade tips to remove residual solder from pads, and knife tips for PLCCs in tight places.

SMTC tip cartridges are for use with the MX-RM3E soldering/rework hand-pieces only. They cannot be used with SP systems, Talon® hand-pieces or



MX Tips

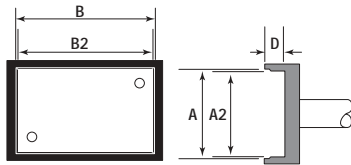


### DIMENSIONS IN INCHES (mm)

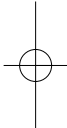
A	B	D	Part No.
.090 (2.29)	.050 (1.27)	.070 (1.79)	SMTC-X01
.140 (3.56)	.060 (1.52)	.070 (1.79)	SMTC-X02
.190 (4.83)	.080 (2.03)	.075 (1.91)	SMTC-X03
.135 (3.43)	.080 (2.03)	.120 (3.05)	SMTC-X35
.150 (3.81)	.095 (2.41)	.100 (2.54)	SMTC-X32
.190 (4.83)	.110 (2.79)	.160 (4.06)	SMTC-X36
.250 (6.35)	.095 (2.41)	.130 (3.30)	SMTC-X33*
.300 (7.62)	.100 (2.54)	.140 (3.56)	SMTC-X34*
.068 (1.73)	.100 (2.54)	.050 (1.27)	SMTC-X05
.110 (2.80)	.250 (6.35)	.080 (2.03)	SMTC-X08
.080 (2.03)	.050 (1.27)	.060 (1.52)	SMTC-X88
.070 (1.78)	.040 (1.02)	.040 (1.02)	SMTC-X96

700 SERIES X=0    700 SERIES X=1    \* = NOT AVAILABLE FOR 500 SERIES





MX Tips



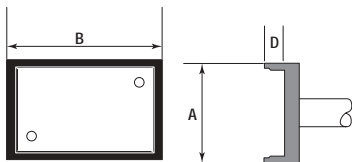
**P**

**DIMENSIONS IN INCHES (mm)**

	A	B	B2	D	Part No.
.38)	.330 (8.38)	.330 (8.38)	.330 (8.38)	.100 (2.54)	SMTC- <b>X</b> 121
.18)	.440 (11.18)	.440 (11.18)	.440 (11.18)	.100 (2.54)	SMTC- <b>X</b> 120
.18)	.480 (12.19)	.480 (12.19)	.520 (13.21)	.110 (2.79)	SMTC- <b>X</b> 159
.32)	.525 (13.34)	.485 (12.32)	.525 (13.34)	.110 (2.79)	SMTC- <b>X</b> 132
.97)	.550 (13.97)	.550 (13.97)	.550 (13.97)	.130 (3.30)	SMTC- <b>X</b> 115
.48)	.610 (15.49)	.570 (14.48)	.610 (15.49)	.110 (2.79)	SMTC- <b>X</b> 118
.75)	.620 (15.75)	.860 (21.84)	.860 (21.84)	.130 (3.30)	SMTC- <b>X</b> 133
.13)	.635 (16.13)	.635 (16.13)	.635 (16.13)	.130 (3.30)	SMTC- <b>X</b> 21
.51)	.650 (16.51)	.885 (22.48)	.885 (22.48)	.130 (3.30)	SMTC- <b>X</b> 43
.15)	.675 (17.15)	.910 (23.11)	.910 (23.11)	.130 (3.30)	SMTC- <b>X</b> 15
.45)	.805 (20.45)	.805 (20.45)	.805 (20.45)	.190 (4.83)	SMTC- <b>X</b> 45*
.45)	.840 (21.34)	.805 (20.45)	.840 (21.34)	.075 (1.91)	SMTC- <b>X</b> 122
.02)	1.020 (25.91)	.985 (25.02)	1.020 (25.91)	.125 (3.18)	SMTC- <b>X</b> 86
.42)	1.040 (26.42)	1.040 (26.42)	1.040 (26.42)	.130 (3.30)	SMTC- <b>X</b> 44*
.58)	1.770 (44.96)	1.125 (28.58)	1.170 (44.96)	.114 (2.90)	SMTC- <b>X</b> 81
.59)	1.200 (30.48)	1.165 (29.59)	1.200 (30.48)	.120 (3.05)	SMTC- <b>X</b> 48
.77)	1.330 (33.78)	1.290 (32.77)	1.330 (33.78)	.110 (2.79)	SMTC- <b>X</b> 125
.64)	1.650 (41.91)	1.650 (41.91)	1.600 (40.64)	.200 (5.08)	SMTC- <b>X</b> 158**

**TIPS X=1 FOR ALL QUADS USE 700 SERIES TIP CARTRIDGES**  
**600 SERIES \*\*= NOT AVAILABLE FOR 600 SERIES**

**These require two power supply units and two hand-pieces. A Dual Hand-Piece is recommended.**



**(INSIDE SOCKET)**

A	B	D	Part No.	Recommended Part No.
.860 (9.14)	.360 (9.14)	.115 (2.91)	SMTC- <b>X</b> 144	SMTC-1144
.556 (11.58)	.556 (14.12)	.120 (3.05)	SMTC- <b>X</b> 109	SMTC-1109
.160 (40.64)	1.160 (40.64)	.115 (2.91)	SMTC- <b>X</b> 145	SMTC-1145

**TIPS X=1 FOR ALL QUADS USE 700 SERIES TIP CARTRIDGES**

**These require two power supply units and two hand-pieces. A Dual Hand-Piece is recommended.**

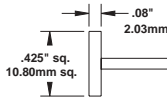




## OTHER SPECIALITY TIP CARTRIDGES

### SMTC-X98\*\*

SMT Connector  
28 Pin



### SMTC-X136\*\*

Hot Plate  
.425" sq. (10.8mm sq.)

### SMTC-X100

Micro XMT  
Small Package  
Co-Axial Tip

SERIES X=0 700 SERIES X=1 800 SERIES X=8

700 OR 800 SERIES

# Microfine Rework Tip Cartridges

This cartridge series is designed for reworking 0201 and 0402 or microfine components with the help of a microscope. This series includes tips that can be used to remove components from the topside approach or can also be used for multi-lead components, LCC and QFP components with access problems. Depending on your application, these tips will meet your micro component rework needs.

### SMTC-X171

Use to remove 0201 and 0402 components from a "topside" angle. This design increases microscope viewing when reworking/removing micro chip capacitors/components.

### SMTC-X172

Designed for fine drag soldering and point-to-point soldering. This tip increases access between components and allows for lead to lead or solder bridge clean-up.

### SMTC-X174

Long reach micro hoof tip designed with a smaller surface area than the mini-hoof for optimal drag soldering of components in tight spots.

### SMTC-X175

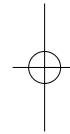
Micro-hoof tip designed with a smaller surface area than the mini-hoof for drag soldering of small/micro leaded components.

### STTC-X90

Microfine tip designed for soldering and touch-up of micro components such as 0201s and 0402s.

SERIES X=0 700 SERIES X=1 800 SERIES X=8

MX-Tips



page  
15



## DESOLDERING ACCESSORIES

<b>Q</b>	<b>MX-DCF1</b>	DS1 Filter Pack: 15 chamber liners, 6 fume filters
	<b>MX-DCF1L</b>	DS1 Chamber Liners (Pack of 40)**
	<b>MX-DCF1F</b>	DS1 Fume Filters (Pack of 20)**
<b>R</b>	<b>MX-DAR1</b>	Air Regulator and Filter with Fittings
<b>S</b>	<b>AC-TC-P</b>	Desolder Tip Cleaner (Pack of 12)
<b>T</b>	<b>AC-CB1-P</b>	Desolder Chamber Cleaning Brush (Pack of 25)
<b>U</b>	<b>AC-CB2-P</b>	Desolder Tube Cleaning Brush (Pack of 6)
<b>V</b>	<b>MX-DVC1</b>	Venturi Cartridge for Desolder Gun
<b>W</b>	<b>MX-DSL1</b>	DS1 Chamber Seal
<b>X</b>	<b>MX-DSL2</b>	DS1 Cartridge Seal
<b>Y</b>	<b>MX-DSB</b>	Desolder Gun Swivel Bushing

## DESOLDERING MAINTENANCE KIT

**MX-DMK1** DS1 Maintenance Kit

### INCLUDES

<b>Z</b>	Long Phillips Screws (Pack of 2)***
<b>AA</b>	Short Phillips Screws (Pack of 4)***
<b>BB</b>	<b>MX-DSB</b> Desolder Gun Swivel Bushing
<b>CC</b>	Hex Screws (Pack of 2)***
<b>DD</b>	<b>MX-DLA</b> Desolder Gun Latch Adjustment (Pack of 10)
<b>EE</b>	Large Springs (Pack of 2)***
<b>FF</b>	Nylon Screws (Pack of 2)***
<b>GG</b>	<b>MX-DSL2</b> DS1 Cartridge Seal (Pack of 2)
<b>HH</b>	Hinge Pins (Pack of 4)***
<b>II</b>	O-Rings (Pack of 2)***
<b>JJ</b>	<b>MX-DSL1</b> DS1 Chamber Seal (Pack of 2)
<b>KK</b>	Small Springs (Pack of 6)***
	<b>MX-DUC</b> DS1 Upper Chamber (Type II Desolder Tool)**

\*\* Not shown \*\*\* Not sold separately

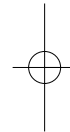
## OTHER SYSTEM COMPONENTS

### POWER SUPPLY AND POWER METER

<b>MX-500P-11</b>	Two Port 100/120 VAC Power Supply
<b>MX-500P-21</b>	Two Port 220/240 VAC Power Supply*
<b>MX-NPM</b>	Net Power Meter

\*220/240 VAC Power Supply does not include power cord.

MX-500



page

17



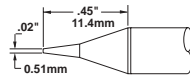
## Soldering Applications

's tip cartridges are designed to suit a wide range of soldering applications. Operators should select the tip that allows maximum contact with the work. You start with a 600 series tip cartridge.

### SP200 SOLDER TIP CARTRIDGES

#### SSC-X17A

Extra Large Chisel  
 .21" (5.3mm)

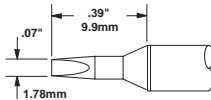


#### SSC-X22A

Conical Sharp  
 .02" (0.51mm)

#### SSC-X13A

Chisel 90°  
 .13" (3.3mm)

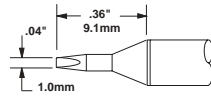


#### SSC-X72A

Conical Chisel  
 .07" (1.78mm)

#### SSC-X46A

Long Reach Chisel  
 .12" (3.0mm)

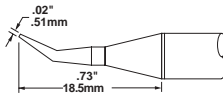


#### SSC-X71A

Conical Chisel  
 .04" (1.0mm)

#### SSC-X36A

Chisel 30°  
 .10" (2.5mm)

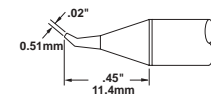


#### SSC-X54A

Sharp Bent 30°  
 .02" (0.51mm)

#### SSC-X42A

Long Reach Chisel 60°  
 .07" (1.78mm)

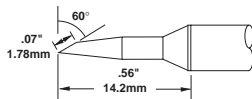


#### SSC-X26A

Sharp Bent 30°  
 .02" (0.51mm)

#### SSC-X70A

Long Chisel  
 .07" (1.78mm)

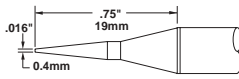


#### SSC-X47A

Bevel 60°  
 .07" (1.78mm)

#### SSC-X37A

Chisel 30°  
 .07" (1.78mm)

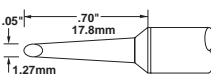


#### SSC-X45A

Bevel 60°  
 .016" (0.4mm)

#### SSC-X38A

Chisel 30°  
 .06" (1.5mm)

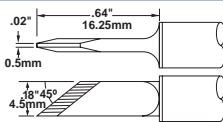


#### SSC-X67A

Drag Soldering Tip  
 (Mini-Hoof)

#### SSC-X25A

Chisel 30°  
 .04" (1.0mm)

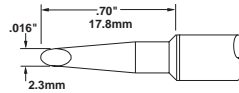


#### SSC-X61A

Drag Soldering Tip  
 (Knife)

#### SSC-X74A

Conical Sharp  
 .055" (1.4mm)

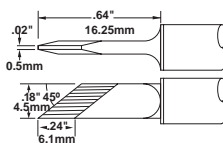


#### SSC-X39A

Drag Soldering Tip  
 (Hoof)

#### SSC-X01A

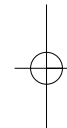
Conical Sharp  
 .04" (1.0mm)



#### SSC-X73A

Drag Soldering Tip  
 (Increased Tinned Area, .24" 6.1mm)

SP200



page

19



## ing And Safety Features

Desoldering System has a number of features, which combine to ensure and cost-effective solution available for self-contained desoldering. The switches off the power supply after a 30-minute redundancy period, thus life and conserving energy.

s are elements that reflect our dedication to operator and process safety. Desoldering System's ESD cable and vacuum line are burn-proof, which injury and prevents damage to expensive process elements. The unit's der collection chamber renders the former glass cartridges obsolete and cess.

Desoldering System's tips are available in two temperature ranges: 600 the best results, choose a tip with an interior diameter only slightly larger e component to be desoldered.



### SP440 DESOLDERING SYSTEM

System Includes Power Supply With Power Cord\*, Hand-Piece Assembly, Workstand Kit With Sponge, Tip Cleaners And Cartridge Removal Pad

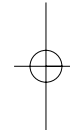
<b>SP440-11</b>	115 VAC Self-Contained Desoldering System
<b>SP440-21</b>	220/240 VAC Self-Contained Desoldering System*

\*220/240 VAC system does not include power cords

### ACCESSORIES & SPARE PARTS

<b>SP-PW3-11</b>	Power Supply with Power Cord
<b>SP-PW3-21</b>	Power Supply with Power Cord*
<b>DP-DSG2</b>	Hand-Piece Assembly (handle, cord, vac line, coil assembly)
<b>DP-WSK2</b>	SP440 Workstand Kit with YS3 Sponge
<b>DP-SL3</b>	Front Seal for DSG2
<b>AC-TC-P</b>	Tip Cleaners (Pack of 12)
<b>AC-CP2</b>	Cartridge Removal Pad
<b>DP-CA2</b>	Coil Assembly
<b>DP-CC</b>	Solder Collection Chamber for DSG2
<b>DP-CF</b>	Filter Pack (12 fume filters, 24 chamber liners)
<b>DP-LF</b>	Filter Pack (5 inline filters)
<b>DP-VB1</b>	Valve Body Assembly (clip, valve, ESD vac. hose)
<b>DP-VL1</b>	Vacuum Line, ESD
<b>DP-WSC2</b>	SP440 Cradle
<b>AC-YS3-P</b>	Workstand Sponge (Pack of 50)

\*220/240 VAC system does not include power cords







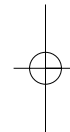


## ation

ork System's vacuum pick-up gently removes components after reflow. cycle is stored and displayed as a guide to help operators quickly establish onent placement. The system then automatically turns off the heat to al shock to adjacent components or to the PCB itself. An integrated also available to prevent the warping of large boards during rework.

e power by adjusting the airflow rate, but to minimize thermal stress, the ins the heater exhaust temperature while maintaining a consistently low accommodate any process change, including the use of new soldering engineer can easily reprogram this set temperature.

QX2



page  
23



## Rework Nozzles

A range of nozzles for the QX2 Convection Rework System. For non-standard nozzle program. Please contact your local Metcal representative for more details.

### STANDARD NOZZLE RANGE

#### DIMENSIONS IN INCHES (mm)

Part No.	Component Types	A	B
<b>NZ-D1113</b>	Nozzle Dual	0.43 (11)	0.51 (13)
<b>NZ-D1116</b>	Nozzle Dual (for SOL 28)	0.43 (11)	0.63 (16)
<b>NZ-D1420</b>	Nozzle Dual	0.55 (14)	0.79 (20)
<b>NZ-D2109</b>	Nozzle Dual	0.35 (09)	0.83 (21)
<b>NZ-D2113</b>	Nozzle Dual	0.51 (13)	0.83 (21)
<b>NZ-Q11</b>	Nozzle Quad (for PLCC 20)	0.43 (11)	0.43 (11)
<b>NZ-Q13</b>	Nozzle Quad (for PLCC 28)	0.51 (13)	0.51 (13)
<b>NZ-Q1415</b>	Nozzle Quad	0.55 (14)	0.60 (15)
<b>NZ-Q17</b>	Nozzle Quad	0.67 (17)	0.67 (17)
<b>NZ-Q18</b>	Nozzle Quad (for QFP 80)	0.71 (18)	0.71 (18)
<b>NZ-Q19</b>	Nozzle Quad (for PLCC 44)	0.75 (19)	0.75 (19)
<b>NZ-Q1925</b>	Nozzle Quad (for QFP 100)	0.75 (19)	0.98 (25)
<b>NZ-Q22</b>	Nozzle Quad	0.87 (22)	0.87 (22)
<b>NZ-Q23</b>	Nozzle Quad	0.91 (23)	0.91 (23)
<b>NZ-Q27</b>	Nozzle Quad (for PLCC 68)	1.06 (27)	1.06 (27)
<b>NZ-Q28</b>	Nozzle Quad	1.10 (28)	1.10 (28)
<b>NZ-Q32</b>	Nozzle Quad (for PLCC 84, QFP 208)	1.26 (32)	1.26 (32)
<b>NZ-Q33</b>	Nozzle Quad (for QFP 120/128/144/160)	1.30 (33)	1.30 (33)
<b>NZ-Q35</b>	Nozzle Quad	1.38 (35)	1.38 (35)
<b>NZ-Q38</b>	Nozzle Quad	1.50 (38)	1.50 (38)
<b>NZ-Q43</b>	Nozzle Quad	1.70 (43)	1.70 (43)

ES

A range of standard nozzles, we also offer a range of box reflow nozzles for reflowing shielding cans, connectors and other square components.

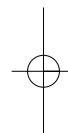


### BOX REFLOW NOZZLES

#### INTERNAL DIMENSIONS IN INCHES (mm)

Part No.	Component Types	A	B
<b>NZ-B23</b>	Nozzle Box	0.91 (23)	0.91 (23)
<b>NZ-B27</b>	Nozzle Box	1.06 (27)	1.06 (27)
<b>NZ-B33</b>	Nozzle Box	1.30 (33)	1.30 (33)
<b>NZ-B35</b>	Nozzle Box	1.38 (35)	1.38 (35)
<b>NZ-B40</b>	Nozzle Box	1.57 (40)	1.57 (40)
<b>NZ-B44</b>	Nozzle Box	1.73 (44)	1.73 (44)

QX2



page  
25



# T-1160

## -1160 Hot Air Pencil

### Air Rework Station

Convection, Metcal's SMT-1160 Hot Air Pencil is designed for those rework applications requiring low thermal stress, including SMDs and temperature-sensitive ceramic components. The SMT system, with variable temperature flow, can also capably remove SMT components.

The SMT-1160 is equipped with a broad range of features for assured effectiveness and reliability. These include an ESD-safe housing and hand-piece, variable airflow control, top temperature control, a nitrogen input facility to suit inert soldering applications and split, fan and fine nozzle options.

The SMT-1160's capacity for non-contact soldering avoids alignment disruption and mechanical shock to components.

### 0 HOT AIR PENCIL

Hand-Piece, 3 Piece Nozzle Kit  
Temperature Module

Hand-Piece Rework Station  
Hand-Piece Rework Station



### ES & SPARE PARTS

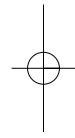
Hand-Piece  
Hand-Piece with Nozzle kit  
Temperature Module  
0.025" (0.64mm)  
0.037" x 0.030" (8.8mm x 0.76mm)  
0.065" (6.7mm)  
0.028" (10.9mm)  
Kit (includes 16812, 16813, 16846)

Assembly SHP-1060A  
Assembly SHP-1060A

Workstand Cradle  
0.01" (2.57mm)  
0.080" (2.03mm)  
0°, .080" (2.03 mm)



SMT  
1160



page  
27



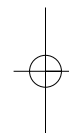
# Global

## Metcal Global Locations

California, is home to Metcal's corporate headquarters, and the central location for development, manufacturing and administration.

With a wide range of customers throughout the world, Metcal has sales, service and distribution centers in North America, Asia, and Europe. Drawing on its organizational strengths and industry expertise, Metcal's distribution network offers seamless, proactive support and access to the full range of products - around the globe.

With advanced electronics manufacturing facilities located, Metcal's network of expertly trained technicians are here, to supply essential technical support and advanced process solutions.



#### Europe Headquarters

OK International Ltd  
Eagle Close, Chandler's Ford  
Hampshire, SO53 4NF U.K.  
Phone: +44 23 8048 9100  
Fax: +44 23 8048 9109

#### Asia Headquarters

OK International Taiwan Ltd  
5F No. 79 Sec. 1  
Hsin-Tai-Wu Road, His-Chih  
Taipei Hsien, Taiwan  
Phone: 886-2-2698 4013  
Fax: 886-2-2698 4021

#### France

OK International SA  
Rue Ampere - ZI Lyon Nord  
69730 Genay, France  
Phone: +33 (0)4 72 08 75 75  
Fax: +33 (0)4 72 08 75 70

#### Italy

OK International Spa  
Strada Statale 11 -No. 28,  
20010 Vittuone (Milano),  
Italia  
Phone: +39 02 9025161  
Fax: +39 02 90111147

#### China

OK International China  
No. 22 Chao Yang Men Wai Avenue  
Beijing Prime Tower, Room 1901  
Chao Yang District,  
Beijing, P. R. China 100020  
Phone: +86 10 6588 3360  
Fax: +86 10 6588 3359

#### Japan

OK International Japan Ltd  
2F ASK Bldg.  
1-24-4 Ebisu  
Shibuya-Ku  
Tokyo 150-0013, Japan  
Phone: +81-3-3449-7451  
Fax: +81-3-3440-2010

