

METCAL

ELECTRONICS BENCH TOOL SOLUTIONS



HAND
SOLDERING,
DESOLDERING
AND REWORK

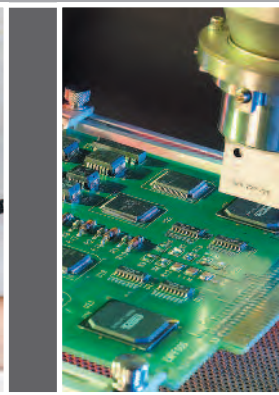
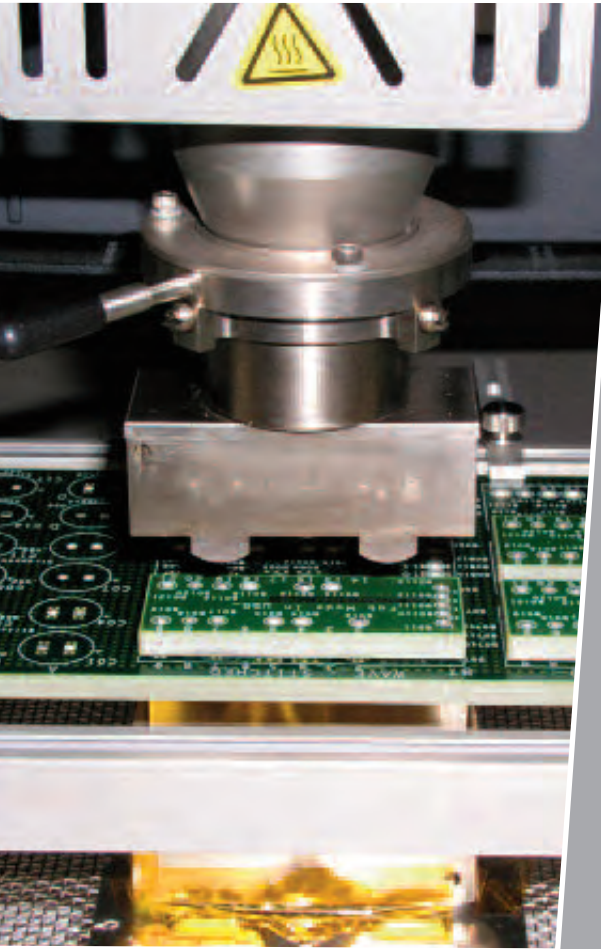
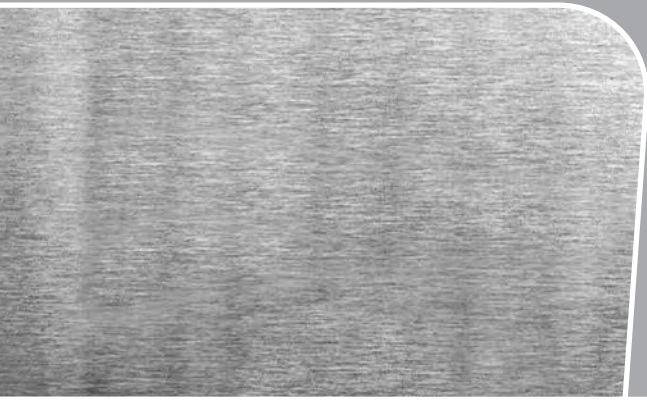
CONVECTION
REWORK

FUME
EXTRACTION

FLUID
DISPENSING



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HAND SOLDERING

CONVECTION REW

DELIVERING CORE TECHNOLOGICAL ADVANTAGES WITH BEST-IN-CLASS PERFORMANCE.

CONTACT US

NORTH AMERICA

OK INTERNATIONAL, INC.
12151 MONARCH STREET
GARDEN GROVE, CA 92841
TEL: 1-714-799-9910
FAX: 1-714-799-9533
INFO@OKINTERNATIONAL.COM

EUROPE

OK INTERNATIONAL LTD.
EAGLE CLOSE, CHANDLERS FORD
HAMPSHIRE, SO53 4NF, U.K.
TEL: +44 (0) 23 8048 9100
FAX: +44 (0) 23 8048 9109
EUROPE@OKINTERNATIONAL.COM

GERMAN SALES SUPPORT

TEL: +49 (0)3222 109 1900
FAX: +49 (0)3222 109 1901
D-INFO@OKINTERNATIONAL.COM

FRENCH SALES SUPPORT

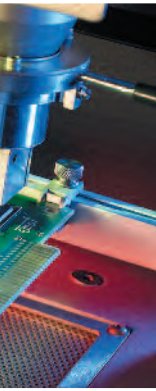
TEL: +33 (0)1 76 71 04 03
FAX: +33 (0)1 70 71 21 50
FR-INFO@OKINTERNATIONAL.COM

ASIA

OK INTERNATIONAL
4 FLOOR WEST, 1ST BUILDING,
TINGWE INDUSTRIAL PARK, 6
LIUFANG ROAD
BAOCHENG 67TH AREA,
BAOAN DISTRICT SHENZHEN,
GUANGDONG, 518101
PRC
TEL: +86-138-2318-7408
CHINA@OKINTERNATIONAL.COM

SALES SUPPORT JAPAN

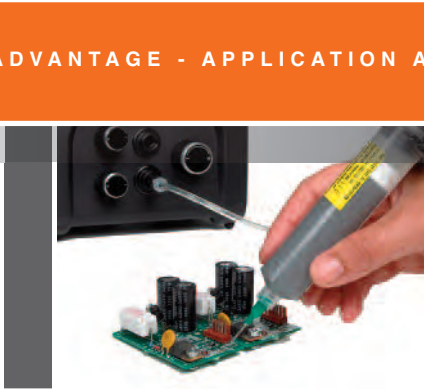
SALES: +81-198-22-7928
SERVICE: +81-03-4520-9629
FAX: +81-03-6745-1439



WORK



FUME EXTRACTION



FLUID DISPENSING



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We are committed to understanding the product needs of our customers, and supply professional grade products that are innovative, reliable, price competitive and easy to use.



Metcal is part of the OK International family and provides expert product support and responsive customer service, with localization to meet regional market needs.

SERVING THE ELECTRONICS ASSEMBLY INDUSTRY FOR OVER 30 YEARS



Visit our site www.metcal.com and social media sites for additional product information, applications, videos, special offers and more!

Hand Soldering, Desoldering &

Single Port

Dual Port Switchable



PS-900



MFR-1100 Series



MFR-1300 Series



MFR-2200 Series

M U L T I F U N C T I O N



PS-900 Tip Hand-Piece



MFR Hand-pieces

SmartHeat® Technology

OK International is the original supplier of SmartHeat® Soldering Technology. SmartHeat® senses the exact thermal requirement for each solder joint and responds by delivering the precise amount of thermal energy required to create a reliable connection.

The result is a high degree of control without resorting to higher tip idle temperatures required by conventional heater process technologies. Consequently, the risk of component and board damage is minimized. This is especially important with the greater thermal demands required by lead-free applications.



Rework Systems Overview

Single Port Selectable



MX-500 Series

Dual Port Simultaneous

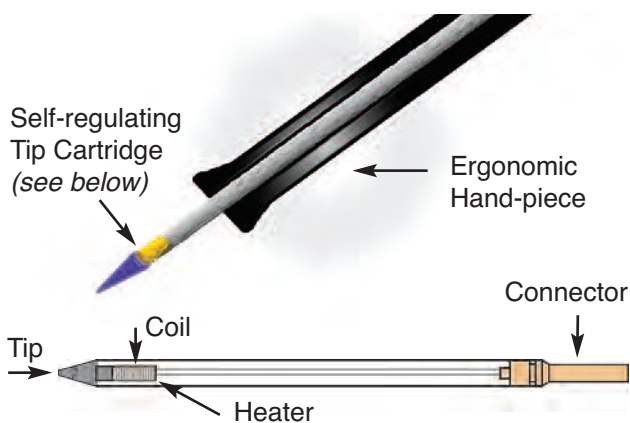


MX-5200 Series

R E W O R K S Y S T E M S



MX Hand-pieces



SmartHeat® Soldering Technology = Variable Power / Fixed Temperature

- ▶ SmartHeat® tips and cartridges sense the load and instantly deliver the right amount of heat directly to the solder joint.
- ▶ The required solder joint temperature drives the heating process, as opposed to the idle tip temperature setting (as in a conventional iron).
- ▶ Operates at lower and safer temperatures. Power is delivered in proportion to the load. SmartHeat® technology eliminates overshoot.
- ▶ No calibration required - saves money and eliminates system down-time.

Watch our SmartHeat® Video on YouTube or www.metcal.com

MX-5200 Dual Simultaneous

Soldering, Desoldering & Rework Systems

The MX-5200 Soldering, Desoldering and Rework Series has the same increased power and process control as the MX-5000 Series, now with dual-simultaneous ports.

For two users or single user with dual applications. The MX-5200 can be operated with two hand-pieces dynamically sharing the 80 watts output power based on demand adding even more application flexibility and speed.

Fast time-to-recovery. Delivers increased production rates and throughput no matter the application. The challenges of high mass components, multilayered boards and lead-free solders are seamlessly tackled by the MX-5200 super-charged power supply.

SmartHeat process control. The technology built-in every Metcal System means that soldering and rework are always performed at safe, controlled temperatures. Metcal users know that moderate fixed temperatures, where power is varied, provides the best assurance for a well controlled soldering and rework process.

TipSaver™ Workstand improves tip life as well as operator ergonomics. This “Auto-Sleep” Workstand reduces the power to the hand-piece when it is placed in the Metcal TipSaver™ Workstand.

Reduction in power will substantially decrease tip oxidation, a major cause of reduced tip life.

Ergonomic Hand-pieces. The aluminium hand-pieces for soldering and rework provides a cooler, lighter weight and more comfortable feel for the operator. And, the Metcal UltraFine™ Hand-piece features a new generation of extremely fine diameter cartridges in a slim profiled handle. Both of these hand-pieces uniquely offer users a choice of three interchangeable grips.

ESD safe and features incoming AC ground monitoring circuitry. The AC (mains) ground monitor detects power line ground failure, immediately alerting the operator and shutting down the system. Only after the power line ground has been restored can the MX-5200 be restarted and soldering operations can be resumed.

Built-in power indication meter with digital display and bar graph that visually provides the operator with feedback on the status of the soldering operation. Whether using a large mass rework tip for QFPs or a fine-point soldering tip, the power indication meter is a valuable resource for making consistent, acceptable solder joints.

Four mode indicators:

Ready Mode: The hand-piece is removed from the workstand, ready for soldering or rework.

Power Mode: The hand-piece's tip is in contact with the load. The power indication meter provides graphical and numeric feedback on the system power output.

Sleep Mode : The hand-piece is at rest in the workstand; power is reduced to the hand-piece.

Powersave Mode: Power to the hand-piece is shut off. This programmable sleep feature allows an operator to set the desired time to cut off power to the hand-piece (from 10 to 120 min.).



MX-5200 Dual Simultaneous Soldering, Desoldering & Rework Systems

SYSTEMS CONFIGURATION

PART NUMBER	MX-PS5200 Power Supply	Hand-pieces				TipSaver™ Workstands		
		MX-H1-AV	MX-H2-UF	MX-PTZ	MX-DS1	MX-W1AV	MX-W4PT	MX-W5DS
MX-5210	✓	✓				✓		
MX-5211	✓	✓ ✓				✓ ✓		
MX-5220	✓		✓			✓		
MX-5241	✓	✓		✓		✓	✓	
MX-5250	✓				✓			✓
MX-5251	✓	✓			✓	✓		✓

SYSTEMS WITH ONE HAND-PIECE

SYSTEMS WITH TWO



MX-5210 Soldering and Rework System
Configured with the Advanced™ Hand-piece. Highly effective for soldering applications including: lead-free, high mass components or boards, thermally sensitive components requiring low operating temperature, high volume production soldering and touch-up soldering operations.

Soldering cartridges: STTC Series and SMTC Series



MX-5211 Soldering and Rework System
Same features as MX-5210 but configured with two Advanced™ Hand-pieces and two TipSaver™ Workstands.

Best Seller

Soldering cartridges: STTC Series and SMTC Series



MX-5220 UltraFine™ Soldering System
Configured with the UltraFine™ Soldering Hand-piece which is a speciality tool for soldering and touch-up of very small components, restricted access or high density component packaging on a PCB.

Soldering cartridges: UFTC cartridges featuring small tip geometries and low mass, suited for small part soldering.



MX-5241 Precision Tweezers, Soldering and Rework System
Combines both the Advanced™ Hand-piece and the Precision Tweezers Hand-piece. Users get maximum application flexibility for soldering and reworking the widest range of surface mount components.

Tweezer cartridges: PTTC Series.
Soldering Cartridges: STTC and SMTC Series



MX-5250 Plated-Through-Hole Component Desoldering System
Includes the MX-DS1 Desoldering hand-piece designed for through-hole desoldering.

Desoldering cartridges: STDC Series provides fast, high quality results

NOTE: Unit requires shop air for desoldering.



MX-5251 Soldering, Desoldering and Rework System
For through-hole desoldering, general soldering, and SMD rework applications. Includes two hand-pieces: the Advanced™ Hand-piece and the MX-DS1 Desoldering hand-piece. Ideal for mixed technology boards. Provides versatility for addressing soldering & rework tasks.

Desoldering cartridges: STDC Series
Soldering cartridges: STTC and SMTC Series.

NOTE: Unit requires shop air for desoldering.

MX-500 Dual Switchable Output

Soldering, Desoldering & Rework Systems

Metcal's MX-500 Soldering and Rework System has been reimagined, adding features and a new look to a bench top icon. The system utilizes SmartHeat® Technology, where each cartridge is equipped with a self-regulating heater which 'senses' its own temperature and closely maintains its pre-set idle temperature for the life of the heater-tip. The tip temperature is determined by the inherent metallurgical properties of the heater; no external adjustment or equipment is required. The MX-500 retains switchable dual port, 40W operation while introducing numerous new features in a new housing.



Key Features & Benefits

- ▶ A built in Net Power Meter which will display a graphical and numerical representation of the power applied to the cartridge.
- ▶ User Programmable PowerSave Mode: the time to enter PowerSave Mode is adjustable from 10 to 120 minutes.
- ▶ Ground Fault Interrupt: AC ground monitor detects power line ground failures and immediately alerts the operator and shuts down the system.
- ▶ Universal Power Supply: automatically senses the input line voltage and adjusts accordingly, which allows for worldwide operation without adaptors or a change in performance.
- ▶ Full compatibility with existing and previous MX upgrade kits, tip-cartridges, hand-pieces and accessories.

SYSTEM WITH ONE HAND-PIECE



MX-500S Soldering / Rework System
Power supply, MX-RM3E soldering and rework hand-piece and WS1 sleeper workstand

Soldering cartridges:
STTC Series and SMTC Series



MX-500AV Soldering / Rework System
Power supply, MX-H1-AV Advanced™ hand-piece and MX-W1AV workstand

Soldering cartridges:
STTC Series and SMTC Series



MX-500UF Ultrafine™ Soldering System
Power supply, MX-H2-UF Ultrafine™ hand-piece and MX-W1AV workstand

Soldering cartridges:
UFTC Series

SYSTEMS WITH TWO HAND-PIECES



MX-500SPT Rework System
Power supply, MX-PTZ precision tweezer hand-piece with MX-W4PT TipSaver workstand and MX-RM3E soldering and rework hand-piece and WS1 sleeper workstand.

Tweezer cartridges:
PTTC Series.
Soldering Cartridges:
STTC and SMTC Series



MX-500DS Desoldering System
Power supply, MX-DS1 desoldering hand-piece with MX-W5DS TipSaver workstand and MX-RM3E soldering and rework hand-piece and WS1 sleeper workstand.

Desoldering cartridges:
STDC Series
Soldering cartridges:
STTC and SMTC Series.
NOTE: Unit requires shop air for desoldering.

POWER SUPPLY WITH NO HAND-PIECE



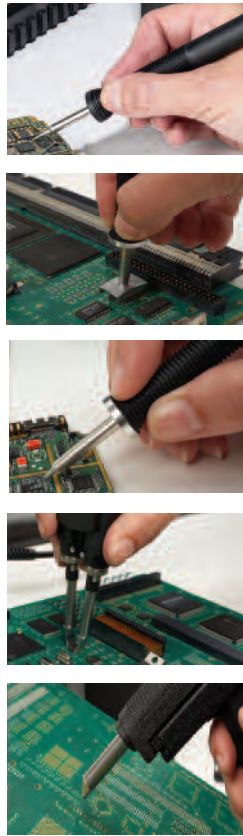
MX-500P
MX-500 dual port switchable power supply

NOTE: Additional Hand-pieces and Upgrade Kits are available, see pages 7 and 8

MX Series Hand-pieces


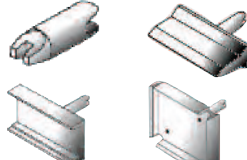

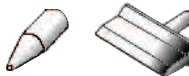

Soldering, Desoldering & Rework Systems

The MX-500 AND MX-5200 Series offers users a choice of hand-pieces to meet the customer's application needs. Each hand-piece has its own range of cartridges with many choices available for tip geometry and temperature. The hand-pieces below are compatible with existing MX-500 and MX-5200 Systems as well as backward compatible with previous MX-500 and MX-5000 Systems



Hand-pieces

Cartridges

<p>MX-RM3E Metcal Hand-piece</p>		<p>STTC Soldering Cartridges See pages 11-12.</p>
<p>MX-H1-AV Metcal Advanced™ Hand-piece</p>		<p>SMTC Rework Cartridges See pages 14-15.</p>
<p>MX-H2-UF Metcal UltraFine™ Hand-piece</p>		<p>UFTC Ultra Fine Soldering Cartridges. See page 13.</p>
<p>MX-PTZ Metcal Precision Tweezer Hand-piece</p>		<p>PTTC Tweezer Cartridges. See page 17. Also available are TATC Cartridges for the previous TALON hand-piece and the existing MX-TALON-01 upgrade kit. See page 15.</p>
<p>MX-DS1 Metcal Desoldering Hand-piece</p>		<p>STDC Desoldering Cartridges. See page 18.</p>



Hand-pieces and Grips

MX-H1-AV	1	Metcal Advanced™ Hand-piece with cord, soldering and rework, two grips included (see *)
MX-H1GR	2	Grip Metcal Advanced™ Hand-piece with black sleeve in ring pattern (*)
MX-H1GS	3	Grip Metcal Advanced™ Hand-piece with black scallop pattern
MX-H1GKG	4	Grip Metcal Advanced™ Hand-piece with green knob pattern (*)
MX-H1-BSR-5		Replacement Sleeve only, black ring pattern (pack of 5) - For MX-H1-AV and MX-H1GR
MX-H1-BSS-5		Replacement Sleeve only, black scallop pattern (pack of 5) - For MX-H1-AV and MX-H1GS
MX-H1-GSK-5		Replacement Sleeve only, green knob pattern (pack of 5) - For MX-H1-AV and MX-H1GKG
MX-H2-UF	5	Metcal UltraFine™ Hand-piece with cord, fine soldering, two grips included (see **)
MX-H2GR	6	Grip Metcal UltraFine™ Hand-piece with black sleeve in ring pattern (**)
MX-H2GRS	7	Short grip Metcal UltraFine™ Hand-piece with black sleeve in ring pattern
MX-H2GS		Grip Metcal UltraFine™ Hand-piece with black sleeve in scallop pattern
MX-H2GKG		Grip Metcal UltraFine™ Hand-piece with green sleeve in knob pattern (**)
MX-H2-BSR-5		Replacement Sleeve only, black ring pattern (pack of 5) - For MX-H2-UF and MX-H2GR
MX-H2-BSS-5		Replacement Sleeve only, black ring pattern (pack of 5) - For MX-H2-UF and MX-H2GS
MX-H2-GSK-5		Replacement Sleeve only, black ring pattern (pack of 5) - For MX-H2-UF and MX-H2GKG
MX-RM3E	8	Metcal Soldering / Rework Hand-piece
MX-PTZ	9	Metcal Precision Tweezer Hand-piece, SMD rework
MX-DS1	10	Metcal Desoldering Hand-piece
MX-RM8E		Metcal Desoldering Hand-piece Cord for MX-DS1
MX-RM5E		Standard Robotic cable (1.83m / 6ft) with connector for Soldering/Rework cartridges
MX-RM6E		Metcal Soldering / Rework Hand-piece for long reach cartridge access

NOTE: Cartridges are not included with hand-pieces. A cartridge removal pad (MX-CP1 see page 8) is included with every hand-piece.

MX Series Accessories

Workstands and Accessories

MX-W1AV	1	Metcal TipSaver™ Workstand, for Metcal Advanced™ and UltraFine™ Hand-pieces
MX-W1CR		Cradle for TipSaver™ Workstand, Advanced™ and UltraFine™ Hand-pieces, incl. knobs
MX-W4PT	2	Metcal TipSaver™ Workstand, for MX-PTZ Hand-piece
MX-W4CR		Cradle for Metcal TipSaver™ Workstand, MX-PTZ Hand-piece, includes knobs
MX-W5DS		Metcal TipSaver™ Workstand, for MX-DS1 Hand-piece
MX-W5CR		Cradle for Metcal TipSaver™ Workstand, MX-DS1 Hand-piece, includes knobs
WS1	3	Sleeper Soldering Workstand for MX-RM3E hand-piece
WST		Talon Workstand for MX-TALON hand-piece
AC-Y10	4	Yellow sponge, pack of 10
AC-YS3-P		Yellow sponge, pack of 50
AC-BP	5	Brass pad, pack of 10
AC-BRUSH		Soft Brass Brush
MX-CP1	7	Cartridge removal pad
AC-CK2		Green Lead Free identification ring for STTC cartridges (pack of 50)

Accessories for MX-DS1 Desoldering Hand-piece

MX-DCF1		Chamber Liners (pack of 15) and Filters (pack of 6)
MX-DCF1L		Chamber Liners (pack of 40)
MX-DCF1F		Filters (pack of 20)
AC-TC	8	Desolder Tip Cleaner
AC-CB1-P		Desolder Chamber Cleaning Brush (pack of 25)
AC-CB2-P		Tube Cleaning Brush (pack of 6)
MX-DSL2		Seal Cartridge
MX-DSB		Swivel Connector
MX-DLA		Desolder Gun Latch Adjustment (pack of 10)
MX-DMK1		Maintenance Kit
MX-DAH4		ESD air hose for MX-DS1 Desoldering Hand-piece
MX-DSL1		Seal Chamber
MX-DVC1		Venturi Cartridge
MX-DAR1		Air Regulator and Filter



All Metcal TipSaver Workstands can be configured as shown above.

UPGRADE KITS GUIDE: HAND-PIECE AND WORKSTAND

PART NUMBER	Hand-pieces					Workstands			
	MX-H1-AV Metcal Advanced™	MX-H2-UF Metcal UltraFine™	MX-PTZ Precision Tweezers	MX-DS1 Desoldering	MX-HPDC	MX-W1AV	MX-W4PT	MX-W5DS	MX-WHPDC
MX-UK1	✓					✓			
MX-UK2		✓				✓			
MX-UK3					✓				✓
MX-UK4			✓				✓		
MX-UK5				✓				✓	

All upgrade kits include a hand-piece and a workstand.



MX-TALON-01 Upgrade kit is also available for the MX-500 Series. It includes the previous MX-TALON hand-piece and WST workstand (as shown right). The TALON hand-piece is for use with TATC cartridges only.

Solder Wire Feeder

Metcal's USF-1000 Solder Wire Feed System adds control and convenience to your soldering process. The digital controls, high performance, and its ability to handle multiple solder diameters provide repeatability and functionality to your process. The USF-1000 pairs with Metcal's SmartHeat® MX-5200 or MX-500 Soldering and Rework Systems.

The soldering system utilizes SmartHeat® Technology, wherein each cartridge is equipped with a self-regulating heater which 'senses' its own temperature and closely maintains its pre-set idle temperature for the life of the heater-tip.



Systems Configuration & Upgrade Kits

MX-5200-SF Soldering / Rework System with USF-1000

Power supply, solder feeder, MX-H7-SF solder feeder hand-piece, USF-FTA-12 Feeder Tube Assembly, USF-GTA-12 Teflon Nozzle, AC-FS1 footswitch and WS1 sleeper work stand



MX-500-SF Soldering / Rework System with USF-1000

Power supply, solder feeder, MX-H7-SF solder feeder hand-piece, USF-FTA-12 Feeder Tube Assembly, USF-GTA-12 Teflon Nozzle, AC-FS1 footswitch and WS1 sleeper work stand



Accessories & Spares

MX-H7-SF	Solder Wire Feeder hand-piece for MX system
USF-FTA-06	Feeder Tube Assembly, 0.25-0.39mm wire dia.
USF-FTA-12	Feeder Tube Assembly, 0.56-0.71mm wire dia.
USF-FTA-17	Feeder Tube Assembly, 0.79-1.27mm wire dia.
USF-GTA-06	Guide Tube and Teflon Nozzle
USF-GTA-12	Guide Tube and Teflon Nozzle
USF-GTA-17	Guide Tube and Teflon Nozzle
AC-FS1	Footswitch

Features & Benefits

- ▶ Digital Controls with multiple Modes of Operation: Forward Feed, Retraction, Delay, and Speed are programmable parameters in either the automatic, forward, or the backward mode of operation.
- ▶ Large LCD Display: displays program parameters and a cycle counter with the selectable unit of measure, millimeters or inches.
- ▶ Internal Program Storage: stores internally thirty (30) programs allowing the operator to select the right program for the right application
- ▶ Password Protection: prevents unintended changes to stored programs
- ▶ Multiple Solder Diameters: compatible with solder diameters 0.4mm to 1.80mm
- ▶ Solder Feed Blades: reduces the tendency for solder balls to form at point of use
- ▶ Solder Spool Lock: secures the solder spool to the unit

USF-1000: solder feeder, MX-H7-SF solder feeder hand-piece, USF-FTA-12 Feeder Tube Assembly, USF-GTA-12 Teflon Nozzle, AC-FS1 footswitch and WS1sleeper



MX Series Specifications

Soldering, Desoldering & Rework Systems



MX-500

MX-5200

MX-5200

Ambient Operating Temperature	10 - 40°C
Maximum Enclosure Temperature	55°C
Input Line Voltage	100 - 240 VAC, grounded circuit
Input Line Frequency	50/60 Hz
Rated Power Consumption	125W
Output Power	Single mode: 80 Watts max. per channel * Dual Mode: 80 Watts shared dynamically *
Output Frequency	13.56 MHz *
Power Supply Dimensions w x d x h	12.1 cm (4.8") x 13.0 cm (5.1") x 23.5 cm (9.3")
Certification / Marking	cTUVus, CE
Tip-to-Ground Potential	<2mV
Tip-to-Ground Resistance	<2 ohms
Idle Temperature Stability	± 1.1°C in still air
Hand-piece Cable Length	L=182 cm (72"), burn proof, ESD safe
Hand-piece Connector	F connector
Weight of the power supply	7.4 lbs (3.35 kg)

* RF SmartHeat Technology provides greater power. More details at www.metcal.com/smarheat

MX-500

Ambient Operating Temperature	10 - 40°C
Maximum Enclosure Temperature	55°C
Input Line Voltage	100 - 240 VAC, grounded circuit
Input Line Frequency	50/60 Hz
Rated Power Consumption	70 W
Output Power	40 Watts max. RF SmartHeat Power *
Output Frequency	13.56 MHz *
Power Supply Dimensions w x d x h	12.1 cm (4.8") x 12.1 cm (4.8") x 2.2 cm (8.8")
Certification / Marking	cNRTLus, CE
Tip-to-Ground Potential	<2mV
Tip-to-Ground Resistance	<2 ohms
Idle Temperature Stability	± 1.1°C in still air
Hand-piece Cable Length	L=182 cm (72"), burn proof, ESD safe
Hand-piece Connector	F connector
Weight of the power supply	5.85 lbs (2.65 kg)

* RF SmartHeat Technology provides greater power. More details at www.metcal.com/smarheat

STTC Soldering Cartridges



STTC SOLDERING CARTRIDGES

Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces

CHISEL		STTC-025P STTC-125P STTC-825P	CHISEL		STTC-036P STTC-136P STTC-836P	
		STTC-525 STTC-025 STTC-125 STTC-825			STTC-536 STTC-036 STTC-136 STTC-836	
		STTC-038P STTC-138P STTC-838P			STTC-513 STTC-013 STTC-113 STTC-813	
		STTC-538 STTC-038 STTC-138 STTC-838			STTC-020 STTC-120 STTC-820	
		STTC-599 STTC-099 STTC-199 STTC-899			STTC-517 STTC-017 STTC-117 STTC-817	
		STTC-037P STTC-137P STTC-837P			STTC-565 STTC-065 STTC-165 STTC-865	
		STTC-537 STTC-037 STTC-137 STTC-837		CONICAL		STTC-090 STTC-190 STTC-890
		STTC-598 STTC-098 STTC-198 STTC-898				STTC-526 STTC-026 STTC-126 STTC-826
		STTC-042 STTC-142 STTC-842				STTC-522 STTC-022 STTC-122 STTC-822
		STTC-514 STTC-014 STTC-114				STTC-045P STTC-145P STTC-845P

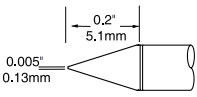
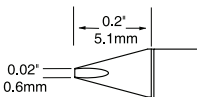
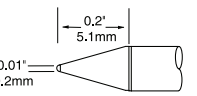
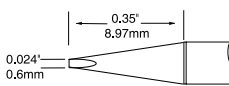
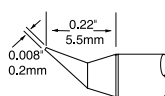
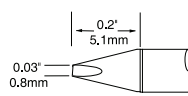
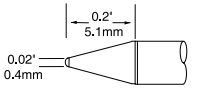
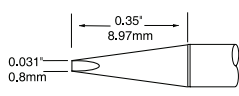
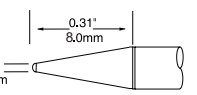
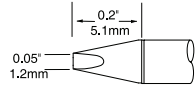
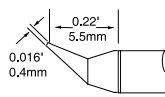
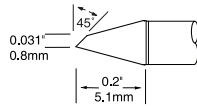
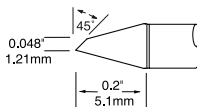
5 = 500 Series and 0 = 600 Series for temperature sensitive applications - 1 = 700 Series for most standard applications.
8 = 800 Series for Ceramic and high thermal demand applications.

UFTC UltraFine Soldering Cartridges



UFTC ULTRAFINE SOLDERING CARTRIDGES

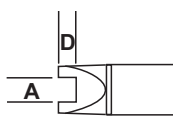


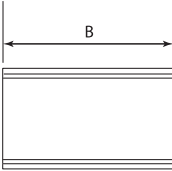
Compatible with: MX-500, MX-5000 and MX-5200 Systems and MX-H2-UF hand-piece

CONICAL		UFTC-7CN01	CHISEL		UFTC-6CH06 UFTC-7CH06
		UFTC-6CN02 UFTC-7CN02			UFTC-6CHL06 UFTC-7CHL06
		UFTC-7CNB02			UFTC-6CH08 UFTC-7CH08
		UFTC-6CN04 UFTC-7CN04			UFTC-6CHL08 UFTC-7CHL08
		UFTC-7CNL04			UFTC-6CH12 UFTC-7CH12
		UFTC-6CNB04 UFTC-7CNB04			
HOOF		UFTC-6DRH408 UFTC-7DRH408			
		UFTC-7DRH412			

7 = 700 Series for most standard applications
6 = 600 Series for temperature sensitive applications

SMTC Rework Cartridges

Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces
All dimensions shown are in mm (inches)

SMTC REWORK CARTRIDGES												
SLOT		A	D	B	SMT TYPE	TUNNEL		A	A2	D	B	SMT TYPE
 	SMTC-505 SMTC-005 SMTC-105	1.7 (.068)	1.27 (.05)	2.5 (.10)	SOT-23	 	SMTC-004 SMTC-104	5.08 (.20)	5.08 (.20)	2.3 (.90)	4.32 (.17)	SOIC-8
	SMTC-596 SMTC-096 SMTC-196	1.78 (.070)	1.02 (.040)	1.02 (.040)	Chip 0402, 0603		SMTC-006 SMTC-106	5.08 (.20)	5.08 (.20)	2.3 (.90)	10.16 (.40)	SOIC-14, 16
	SMTC-088 SMTC-188	2.03 (.080)	1.52 (.60)	1.27 (.050)	Chip 0402, 0603, 0805		SMTC-0142 SMTC-1142	5.18 (.204)	5.18 (.204)	2.54 (.100)	8.89 (.350)	SOIC-14
	SMTC-501 SMTC-001 SMTC-101	2.3 (.090)	1.8 (.070)	1.3 (.050)	Chip 0805		SMTC-047 SMTC-147	8.51 (.335)	8.51 (.335)	5.08 (.200)	6.35 (.250)	DPAC
	SMTC-502 SMTC-002 SMTC-102	3.6 (.14)	1.8 (.07)	1.5 (.06)	Chip 1206,1210		SMTC-126	8.64 (.340)	8.0 (.315)	1.88 (.074)	18.8 (.740)	SOJ-28, SOM-32
	SMTC-132	3.81 (.150)	2.54 (.10)	2.41 (.095)	Chip Box B EIA SOPM-3528		SMTC-007 SMTC-107	9.53 (.375)	9.53 (.375)	3.20 (.125)	18.3 (.720)	SOIC-28
	SMTC-536 SMTC-036 SMTC-136	4.8 (.190)	4.06 (.16)	2.8 (.110)	Chip Box B EIA SOPM-4532		SMTC-009 SMTC-109	9.53 (.375)	9.53 (.375)	3.18 (.125)	15.75 (.620)	SOIC-24
	SMTC-503 SMTC-003 SMTC-103	4.83 (.190)	1.91 (.075)	2.03 (.080)	Chip 1812		SMTC-010 SMTC-110	9.53 (.375)	9.53 (.375)	3.20 (.125)	13.20 (.520)	SOIC-20
							SMTC-040 SMTC-140	11.43 (.450)	10.40 (.410)	1.90 (.075)	25.9 (1.02)	SOJ-40, SOM-32

5 = 500 Series & 0 = 600 Series for temperature sensitive applications. 1 = 700 Series for most standard applications.

SMTC Rework Cartridges



SMTC REWORK CARTRIDGES

Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces. All dimensions shown are in mm (inches)

QUAD	SMTC TYPE	A	A2	D	B	B2	SMTC TYPE	BLADE TYPE	
		(.330)	(.360)	(.100)	(.330)	(.360)			
	SMTC-0121	8.38	8.38	2.54	8.38	8.38	SQFP 48 (EUA)	SMTC-064 SMTC-164	5mm (.20") Short
	SMTC-1121	(.330)	(.330)	(.100)	(.330)	(.330)	PLCC 20		
	SMTC-012	10.16	9.14	3.80	10.16	9.14	PLCC 20	SMTC-560 SMTC-060	10mm (.40") Long
	SMTC-112	(.400)	(.360)	(.150)	(.400)	(.360)			
	SMTC-0120	11.18	11.18	2.54	11.18	11.18	SQFP 64 (EUA)	SMTC-160 SMTC-860	15.75mm (.62") Long
	SMTC-1120	(.440)	(.440)	(.100)	(.440)	(.440)			
	SMTC-1159	12.19	11.18	2.79	13.21	12.19	TQFP 44	SMTC-062 SMTC-162 SMTC-862	22mm (.86") Long
	SMTC-013	12.70	11.56	3.80	12.70	11.56	PLCC 28		
	SMTC-113	(.500)	(.455)	(.150)	(.500)	(.455)	PLCC 32	SMTC-062 SMTC-162 SMTC-862	22mm (.86") Long
	SMTC-116	12.70	11.43	3.80	15.24	13.97			
	SMTC-1132	13.34	12.32	2.79	13.34	12.32	TQFP 80	SMTC-062 SMTC-162 SMTC-862	22mm (.86") Long
	SMTC-0118	15.49	14.48	2.79	15.49	14.48	VQFP 100 (EUA)		
	SMTC-1118	(.610)	(.570)	(.110)	(.610)	(.570)	QFP 100 Rectangular	SMTC-062 SMTC-162 SMTC-862	22mm (.86") Long
	SMTC-043	16.51	16.51	3.30	22.48	22.48			
SMTC-143	(.650)	(.650)	(.130)	(.885)	(.885)	PLCC 44	SMTC-0BL050 SMTC-1BL050 SMTC-8BL050	5mm (.20") Short	
SMTC-014	17.78	16.76	3.80	17.78	16.76				
SMTC-114	(.700)	(.660)	(.150)	(.700)	(.660)	PLCC 52	SMTC-0BL100 SMTC-1BL100 SMTC-8BL100	10mm (.40") Short	
SMTC-117	20.32	19.30	3.80	20.32	19.30				
SMTC-118	25.27	19.30	3.80	25.27	19.30	PLCC 68	SMTC-0BL150 SMTC-1BL150 SMTC-8BL150	15mm (.59") Short	
SMTC-144	26.42	26.42	3.30	26.42	26.42	QFP 100 Square			
HOOF	SMTC-5175 SMTC-0175 SMTC-1175 SMTC-8175								
	SMTC-5174 SMTC-0174 SMTC-1174 SMTC-8174								
	SMTC-0167 SMTC-1167								
	SMTC-0169 SMTC-1169								
	SMTC-0183 SMTC-1183 SMTC-8183								
	SMTC-0170 SMTC-1170								
	SMTC-5147 SMTC-0147 SMTC-1147 SMTC-8147								
	HOOK & CONICAL	SMTC-5172 SMTC-0172 SMTC-1172 SMTC-8172							
SMTC-5171 SMTC-0171 SMTC-1171 SMTC-8171									
SMTC-5161 SMTC-0161 SMTC-1161									
SMTC-5173 SMTC-1173 SMTC-8173									
STTC-1173P STTC-8173P									
KNIFE		SMTC-5172 SMTC-0172 SMTC-1172 SMTC-8172							
	SMTC-5171 SMTC-0171 SMTC-1171 SMTC-8171								
	SMTC-5161 SMTC-0161 SMTC-1161								
	SMTC-5173 SMTC-1173 SMTC-8173								
	SMTC-5172 SMTC-0172 SMTC-1172 SMTC-8172								
	SMTC-5171 SMTC-0171 SMTC-1171 SMTC-8171								

5 = 500 Series & 0 = 600 Series for temperature sensitive applications. 1 = 700 Series for most standard applications.
8 = 800 Series for Ceramic and high thermal demand applications.

Dual and Hoof Cartridge Tips



The success of conduction soldering depends upon the availability and controlled flow of thermal energy into the connection during two critical phases – flux activation and intermetallic bond formation. Higher thermal demand applications such as microwave shields, heavy block type housing and tabbing, preheat applications, BGA removal as an alternative to convection, cell phone shields, and industrial lugs and leads require additional thermal energy during these critical phases.

To address these challenging applications, Metcal offers the MX-HPDC dual cartridge hand-piece with the MX-WHPDC workstand for use with the MX series power supplies, along with a new series of (5) SMTC dual-shaft cartridges. Dual shaft cartridges are available with 700 & 800 series heaters.



Systems Configuration & Upgrade Kits

- ▶ MX-5200 power supply in dual-simultaneous mode to provide 40W of power to both heaters
- ▶ 2x MX-5200 power supplies to provide 80W of power to both heaters



Part Number	Description
MX-HPDC	Dual Cartridge Hand-Piece
MX-WHPDC	Workstand for Dual Cartridge Hand-Piece
MX-UK3	Upgrade Kit, MX-HPDC Hand-Piece & MX-WHPDC Workstand
SMTC-xCH75D	Dual Cartridge Chisel, 7.5mm
SMTC-xCH100D	Dual Cartridge Chisel, 10mm
SMTC-xCH150D	Dual Cartridge Chisel, 15mm
SMTC-xDRH75D	Dual Cartridge, Hoof, Drag, 7.5mm
SMTC-xCHB100D	Dual Cartridge Chisel, Bent, 10mm

Concave Hoof Cartridges

Metcal is pleased to release our new Concave Hoof geometries to our family of rework cartridges.

The new cartridges consist of 2mm and 3mm geometrics in the SMTC and SxP series.

The concave hoof cartridges improve the drag soldering techniques as the concave face of the tip provides a reservoir of solder. These are ideal for drag soldering multi-lead devices.

	<p>SMTC-0185 SMTC-1185</p>
	<p>SMTC-0186 SMTC-1186</p>

PTTC Tweezer Cartridges

TATC Talon Cartridges

Compatible with: MX-500, MX-5000,
and MX-5200 Systems and MX-PTZ
Precision Tweezers hand-piece

Compatible with: MX-500 Systems
and MX-Talon hand-piece

CONICAL

BLADE

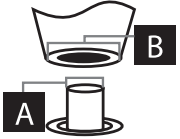


PTTC TWEezer CARTRIDGES		TATC TALON CARTRIDGES	
	<p>PTTC-601 PTTC-701 PTTC-801</p>		<p>TATC-609</p>
	<p>PTTC-701B PTTC-801B</p>		<p>TATC-601</p>
	<p>PTTC-602 PTTC-702 PTTC-802</p>		<p>TATC-608</p>
	<p>PTTC-603 PTTC-703 PTTC-803</p>		<p>TATC-602</p>
	<p>PTTC-608B PTTC-708B PTTC-808B</p>		<p>TATC-605</p>
	<p>PTTC-604 PTTC-704 PTTC-804</p>		<p>TATC-603</p>
	<p>PTTC-605 PTTC-705 PTTC-805</p>		<p>TATC-604</p>
	<p>PTTC-606 PTTC-706 PTTC-806</p>		<p>TATC-606</p>
	<p>PTTC-607 PTTC-707 PTTC-807</p>		

6 = 600 Series for temperature sensitive applications. 7 = 700 Series for most standard applications.
8 = 800 Series for Ceramic and high thermal demand applications.

STDC Desolder Cartridges

Compatible with: MX-500 MX-5000 and MX-5200 Systems, MX-DS1 Desoldering hand-piece
All dimensions shown are in mm (inches)

STDC DESOLDER CARTRIDGES

	A	B	C	TYPE	
	STDC-102 STDC-802	0.64 (.025)	1.40 (.055)	11.43 (.45)	Standard
	STDC-103 STDC-803	0.76 (.029)	1.68 (.066)	11.17 (.44)	Standard
	STDC-104 STDC-804	1.02 (.04)	1.78 (.07)	10.92 (.43)	Standard
 <p>Standard</p>	STDC-105 STDC-805	1.27 (.05)	2.03 (.08)	10.66 (.42)	Standard
	STDC-106 STDC-806	1.52 (.06)	2.29 (.09)	10.41 (.41)	Standard
	STDC-107 STDC-807	2.41 (.09)	3.18 (.12)	9.14 (.36)	Standard
	STDC-703L STDC-803L	0.76 (.03)	1.68 (.06)	21.33 (.84)	Long Reach
 <p>Long Reach</p>	STDC-704L STDC-804L	1.02 (.04)	1.79 (.07)	21.08 (.83)	Long Reach
	STDC-705L STDC-805L	1.27 (.05)	2.03 (.08)	20.82 (.82)	Long Reach

1 = 700 Series (standard length) and 7 = 700 Series (long reach) for most standard applications.
8 = 800 Series for Ceramic and high thermal demand applications.