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Find the *Metcal SMTC-002* at our website: ***Click HERE***

Hand Soldering, Desoldering &

Single Port



PS-900



MFR-1100 Series

Dual Port Switchable



MFR-1300 Series



NEW MX-500 Series

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



PS-900 Tip Hand-Piece



MFR Hand-pieces



MX 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

Dual Port Simultaneous



MFR-2200 Series



MX-5200 Series

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



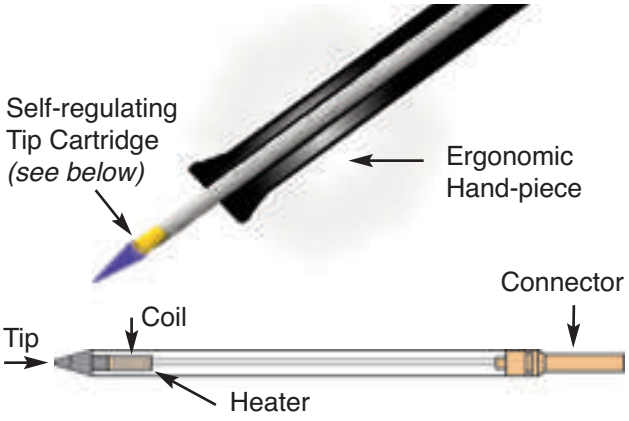
NEW STYLE

MFR Hand-pieces



Also compatible with the New MX-500 System

MX Hand-pieces



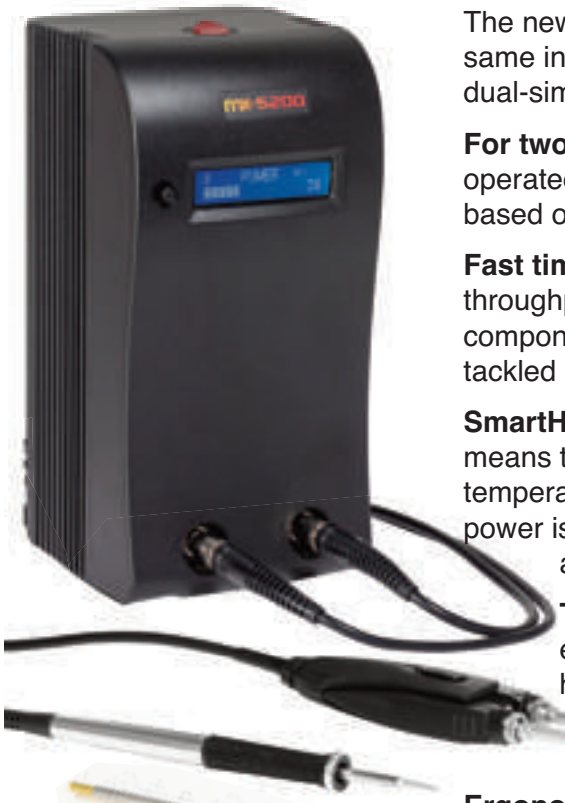
SmartHeat® Soldering Technology = Variable Power / Fixed Temperature

- 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 new MX-5200 Soldering, Desoldering and Rework Series offers 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. Delivering 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. Our 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, provide 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. This AC (mains) ground monitor detects power line ground failures and immediately alerts the operator and shuts 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 120min).



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



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

Desoldering cartridges: STDC Series provide assuranc for fast, high quality results

NOTE: Unit requires shop air for desoldering.

SYSTEMS WITH TWO HAND-PIECES



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-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-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 adressing 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. Only after the power line has been restored, can the MX-500 be restarted and soldering operations can be resumed.
- 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.
- Greater process control with SmartHeat® Technology
- Reduced space requirements

System with ONE hand-piece



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

Soldering cartridges:
STTC Series and SMTC Series

MX-500 System configuration with MX-H2-UF hand-piece coming soon. Check www.metcal.com for more details.

Power Supply with NO hand-piece



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

Systems with TWO hand-pieces



MX-500SPT Rework System
Includes: 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
Includes: 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.

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

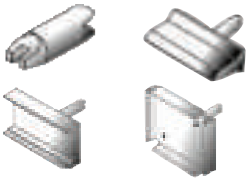










Hand-pieces	Cartridges	
MX-RM3E Metcal Hand-piece		**STTC Soldering Cartridges See pages 10-11.**
MX-H1-AV Metcal Advanced™ Hand-piece		**SMTC Rework Cartridges See pages 13-14.**
MX-H2-UF Metcal UltraFine™ Hand-piece		**UFTC Ultra Fine Soldering Cartridges. See page 12.**
MX-PTZ Metcal Precision Tweezer Hand-piece		**PTTC Tweezer Cartridges. See page 15.** Also available are TATC Cartridges for the previous TALON hand-piece and the existing MX-TALON-01 upgrade kit. See page 15.
MX-DS1 Metcal Desoldering Hand-piece		**STDC Desoldering Cartridges. See page 16.**



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)
AC-PTP1	Rubber tip cleaning pad insert for all MX workstands (pack of 1)
AC-PTP3	Rubber tip cleaning pad insert for all MX workstands (pack of 3)
AC-PTP10	Rubber tip cleaning pad insert for all MX workstands (pack of 10)

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

4



5



8



1 2



All Metcal TipSaver Workstands can be configured as shown above.

7



3



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-W1AV	MX-W4PT	MX-W5DS
MX-UK1	✔				✔		
MX-UK2		✔			✔		
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.



MX Series Specifications

Soldering, Desoldering & Rework Systems



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/smartheat**

MX-500

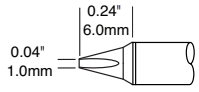
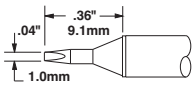
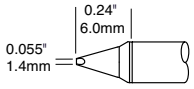
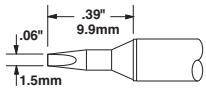
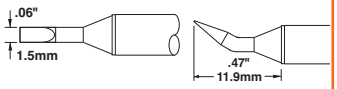
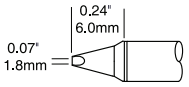
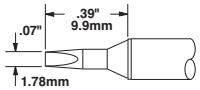
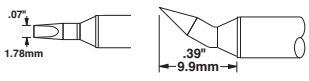
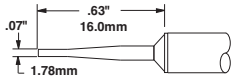
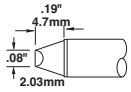
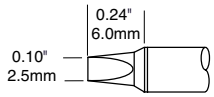
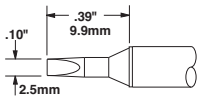
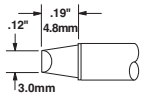
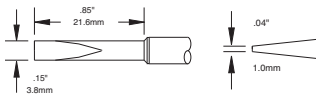
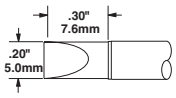
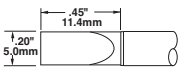
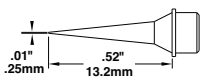
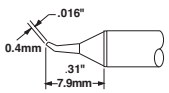
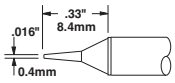
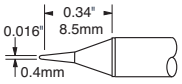
Ambient Operating Temperature	10 - 40°C
Maximum Enclosure Temperature	55°C
Input Line Voltage	100 - 240 VAC, grounded circuit
Input Line Frequency	50/60 Hz
Rated Power Consumption	70 W
Output Power	**40 Watts max. RF SmartHeat Power ***
Output Frequency	**13.56 MHz ***
Power Supply Dimensions w x d x 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/smartheat**

STTC Soldering Cartridges



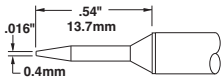
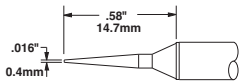
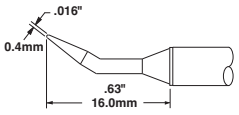
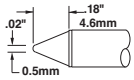
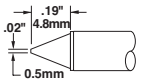
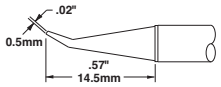
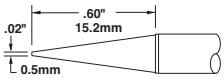
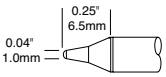
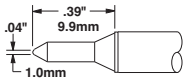
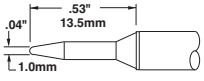
STTC Soldering Cartridges	Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces

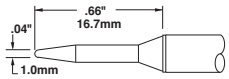
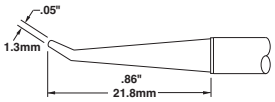
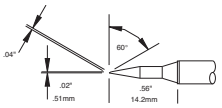
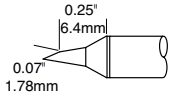
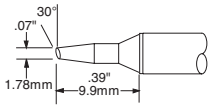
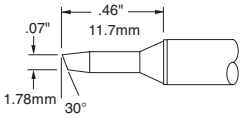
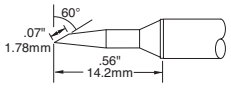
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		STTC-138P STTC-838P
		STTC-538 STTC-038 STTC-138 STTC-838
		STTC-599 STTC-099 STTC-199 STTC-899
		STTC-137P STTC-837P
		STTC-537 STTC-037 STTC-137 STTC-837
		STTC-598 STTC-098 STTC-198 STTC-898
		STTC-542 STTC-042 STTC-142 STTC-842
		STTC-514 STTC-014 STTC-114
CHISEL		STTC-136P STTC-836P
		STTC-536 STTC-036 STTC-136 STTC-836
		STTC-513 STTC-013 STTC-113 STTC-813
		STTC-020 STTC-120 STTC-820
		STTC-517 STTC-017 STTC-117 STTC-817
		STTC-565 STTC-065 STTC-165 STTC-865
CONICAL		STTC-590 STTC-090 STTC-190 STTC-890
		STTC-526 STTC-026 STTC-126 STTC-826
		STTC-522 STTC-022 STTC-122 STTC-822
		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.

STTC Soldering Cartridges

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

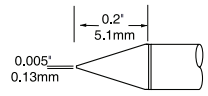
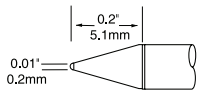
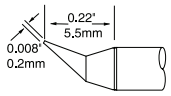
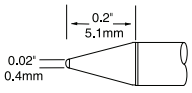
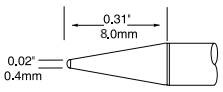
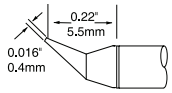
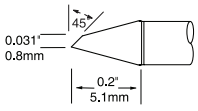
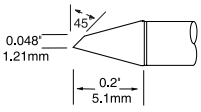
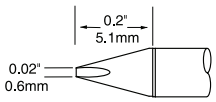
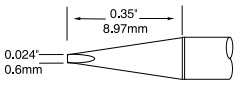
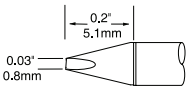
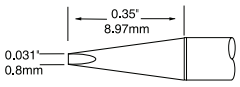
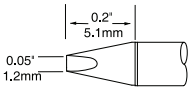
STTC Soldering Cartridges	
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	STTC-545 STTC-045 STTC-145 STTC-845
	STTC-540 STTC-040 STTC-140 STTC-840
	STTC-511 STTC-011 STTC-111
	STTC-516 STTC-016 STTC-116 STTC-816
	STTC-544 STTC-044 STTC-144 STTC-844
	STTC-543 STTC-043 STTC-143 STTC-843
	STTC-101P STTC-801P
	STTC-531 STTC-031 STTC-131
	STTC-501 STTC-001 STTC-101

CONICAL 	STTC-507 STTC-007 STTC-107
	STTC-541 STTC-041 STTC-141 STTC-841
BEVEL 	STTC-546 STTC-046 STTC-146 STTC-846
	STTC-147P STTC-847P
	STTC-535 STTC-035 STTC-135
	STTC-505 STTC-005 STTC-105
	STTC-547 STTC-047 STTC-147 STTC-847

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

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

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

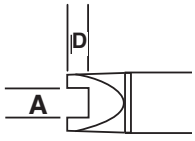
7 = 700 Series for most standard applications

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)

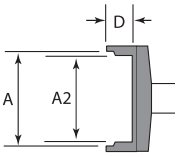
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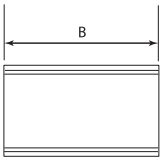




	A	D	B	SMT TYPE
SMTC-505 SMTC-005 SMTC-105	1.7 (.068)	1.27 (.05)	2.5 (.10)	SOT-32
SMTC-596 SMTC-096 SMTC-196	1.78 (.070)	1.02 (.040)	1.02 (.040)	Chip 0402, 0603
SMTC-588 SMTC-088 SMTC-188	2.03 (.080)	1.52 (.60)	1.27 (.050)	Chip 0402, 0603, 0805
SMTC-501 SMTC-001 SMTC-101	2.3 (.090)	1.8 (.070)	1.3 (.050)	Chip 0805
SMTC-502 SMTC-002 SMTC-102	3.6 (.14)	1.8 (.07)	1.5 (.06)	Chip 1206,1210
SMTC-132	3.81 (.150)	2.54 (.10)	2.41 (.095)	Chip Box B EIA SOPM-3528
SMTC-536 SMTC-036 SMTC-136	4.8 (.190)	4.06 (.16)	2.8 (.110)	Chip Box B EIA SOPM-4532
SMTC-503 SMTC-003 SMTC-103	4.83 (.190)	1.91 (.075)	2.03 (.080)	Chip 1812

TUNNEL

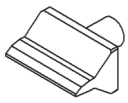




	A	A2	D	B	SMT TYPE
SMTC-004 SMTC-104	5.08 (.20)	5.08 (.20)	2.3 (.90)	4.32 (.17)	SOIC-8
SMTC-006 SMTC-106	5.08 (.20)	5.08 (.20)	2.3 (.90)	10.16 (.40)	SOIC-14, 16
SMTC-0142 SMTC-1142	5.18 (.204)	5.18 (.204)	2.54 (.100)	8.89 (.350)	SOIC-14
SMTC-047 SMTC-147	8.51 (.335)	8.51 (.335)	5.08 (.200)	6.35 (.250)	DPAC
SMTC-126	8.64 (.340)	8.0 (.315)	1.88 (.074)	18.8 (.740)	SOJ-28, SOM-32
SMTC-007 SMTC-107	9.53 (.375)	9.53 (.375)	3.20 (.125)	18.3 (.720)	SOIC-28
SMTC-009 SMTC-109	9.53 (.375)	9.53 (.375)	3.18 (.125)	15.75 (.620)	SOIC-24
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.

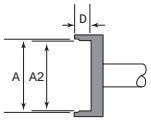
SMTC Rework Cartridges

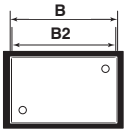


SMTC Rework Cartridges

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)

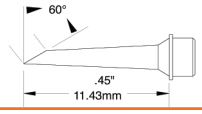
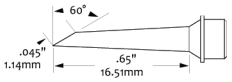
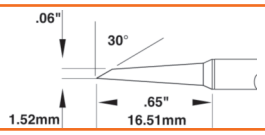
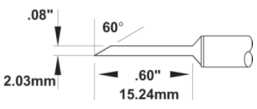
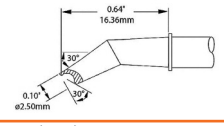
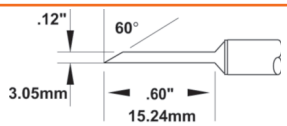
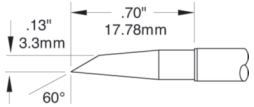
QUAD



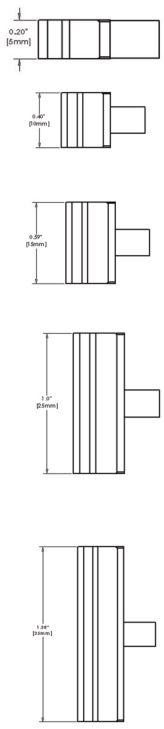


	A	A2	D	B	B2	SMT TYPE
SMTC-0121 SMTC-1121	8.38 (.330)	8.38 (.330)	2.54 (.100)	8.38 (.330)	8.38 (.330)	SQFP 48 (EIJA)
SMTC-0112 SMTC-1112	10.16 (.400)	9.14 (.360)	3.80 (.150)	10.16 (.400)	9.14 (.360)	PLCC 20
SMTC-0120 SMTC-1120	11.18 (.440)	11.18 (.440)	2.54 (.100)	11.18 (.440)	11.18 (.440)	SQFP 64 (EIJA)
SMTC-1159	12.19 (.480)	11.18 (.440)	2.79 (.110)	13.21 (.520)	12.19 (.480)	TQFP 44
SMTC-013 SMTC-113	12.70 (.500)	11.56 (.455)	3.80 (.150)	12.70 (.500)	11.56 (.455)	PLCC 28
SMTC-116	12.70 (.500)	11.43 (.450)	3.80 (.150)	15.24 (.600)	13.97 (.550)	PLCC 32
SMTC-1132	13.34 (.525)	12.32 (.485)	2.79 (.110)	13.34 (.525)	12.32 (.485)	TQFP 80
SMTC-0118 SMTC-1118	15.49 (.610)	14.48 (.570)	2.79 (.110)	15.49 (.610)	14.48 (.570)	VQFP 100 (EIJA)
SMTC-043 SMTC-143	16.51 (.650)	16.51 (.650)	3.30 (.130)	22.48 (.885)	22.48 (.885)	QFP 100 Rectangular
SMTC-014 SMTC-114	17.78 (.700)	16.76 (.660)	3.80 (.150)	17.78 (.700)	16.76 (.660)	PLCC 44
SMTC-117	20.32 (.800)	19.30 (.760)	3.80 (.150)	20.32 (.800)	19.30 (.760)	PLCC 52
SMTC-118	25.27 (.995)	19.30 (.760)	3.80 (.150)	25.27 (.995)	19.30 (.760)	PLCC 68
SMTC-144	26.42 (1.040)	26.42 (1.040)	3.30 (.130)	26.42 (1.040)	26.42 (1.040)	QFP 100 Square

HOOF

	SMTC-5175 SMTC-0175 SMTC-1175 SMTC-8175
	SMTC-5174 SMTC-0174 SMTC-1174 SMTC-8174
	SMTC-5167 SMTC-0167 SMTC-1167
	SMTC-5169 SMTC-0169 SMTC-1169
	SMTC-0183 SMTC-1183 SMTC-8183
	SMTC-0170 SMTC-1170
	SMTC-5147 SMTC-0147 SMTC-1147 SMTC-8147

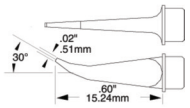
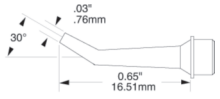
BLADE



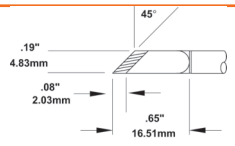
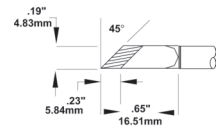
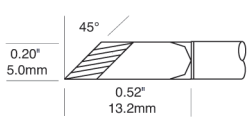
	A	BLADE TYPE
SMTC-064 SMTC-164	5mm (.20")	Short
SMTC-560 SMTC-060 SMTC-160 SMTC-860	10mm (.40")	Long
SMTC-561 SMTC-061 SMTC-161 SMTC-861	15.75mm (.62")	Long
SMTC-562 SMTC-062 SMTC-162 SMTC-862	22mm (.86")	Long

	A	BLADE TYPE
SMTC-0BL050 SMTC-1BL050 SMTC-8BL050	5mm (.20")	Short
SMTC-0BL100 SMTC-1BL100 SMTC-8BL050	10mm (.40")	Short
SMTC-0BL150 SMTC-1BL150 SMTC-8BL150	15mm (.59")	Short
SMTC-0BL250 SMTC-1BL250 SMTC-8BL250	25mm (1.0")	Long
SMTC-0BL350 SMTC-1BL350 SMTC-8BL350	35mm (1.38")	Long

HOOK & CONICAL

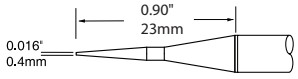
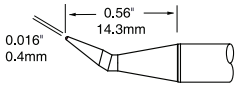
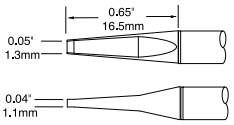
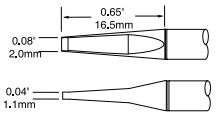
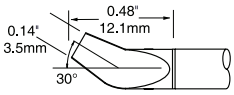
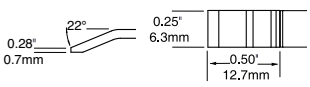
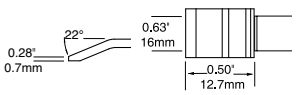
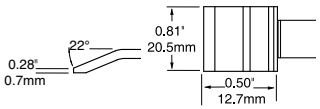
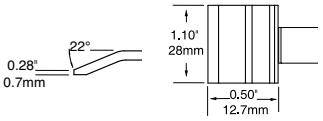
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	SMTC-5171 SMTC-0171 SMTC-1171 SMTC-8171

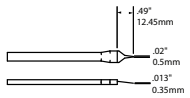
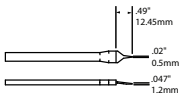
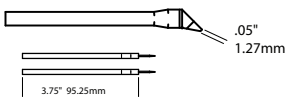
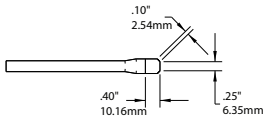
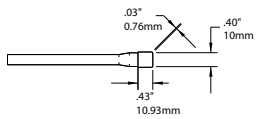
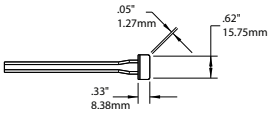
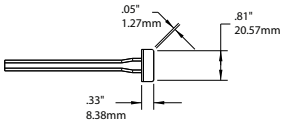
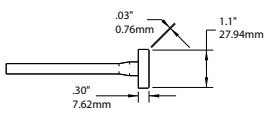
KNIFE

	SMTC-5161 SMTC-0161 SMTC-1161
	SMTC-5173 SMTC-1173 SMTC-8173
	STTC-1173P STTC-8173P

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.

PTTC Tweezer Cartridges
TATC Talon Cartridges

	PTTC Tweezer Cartridges	Compatible with: MX-5000 and MX-5200 Systems and MX-PTZ Precision Tweezers hand-piece
CONICAL		PTTC-601 PTTC-701 PTTC-801
		PTTC-701B PTTC-801B
BLADE		PTTC-602 PTTC-702 PTTC-802
		PTTC-603 PTTC-703 PTTC-803
		PTTC-608B PTTC-708B PTTC-808B
		PTTC-604 PTTC-704 PTTC-804
		PTTC-605 PTTC-705 PTTC-805
		PTTC-606 PTTC-706 PTTC-806
		PTTC-607 PTTC-707 PTTC-807

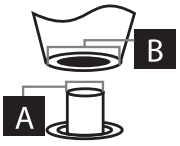
TATC Talon Cartridges	Compatible with: MX-500 Systems and MX-Talon hand-piece
	TATC-609
	TATC-601
	TATC-608
	TATC-602
	TATC-605
	TATC-603
	TATC-604
	TATC-606

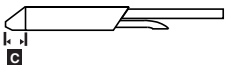
6 = 600 Series for temperature sensitive applications. 7 = 700 Series for most standard applications.
8 = 800 Series for Ceramic and high thermal demand applications.

STDC Desolder Cartridges

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)





Standard



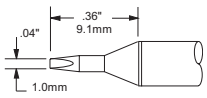
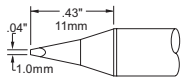
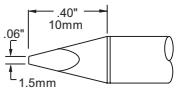
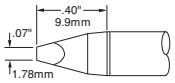
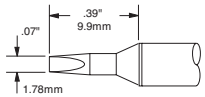
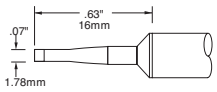
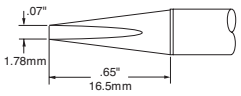
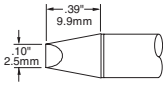
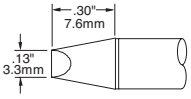
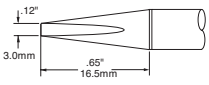
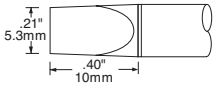
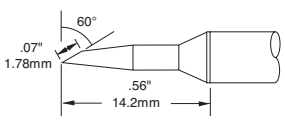
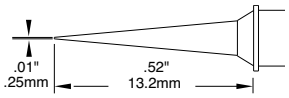
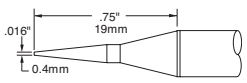
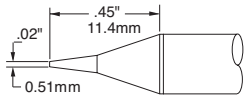
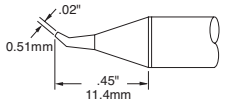
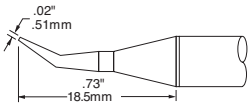
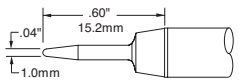
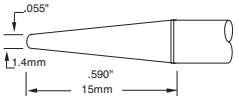
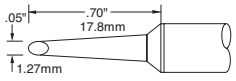
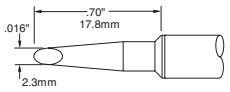
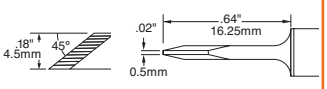
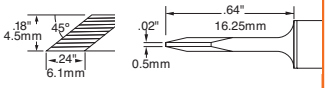
Long Reach

	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
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
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.

SSC Soldering Cartridges

Compatible with: Previous SP200 System and new MFR-1160 & MFR-1161 Systems with MFR-H6-SSC Hand-piece

	SSC Soldering Cartridges	
CHISEL		SSC-671A SSC-771A
		SSC-625A SSC-725A
		SSC-638A SSC-738A
		SSC-637A SSC-737A
		SSC-672A SSC-772A
		SSC-642A SSC-742A
		SSC-670A SSC-770A
		SSC-636A SSC-736A
		SSC-613A SSC-713A
		SSC-646A SSC-746A
		SSC-617A SSC-717A
BEVEL		SSC-647A SSC-747A
CONICAL		SSC-690A SSC-790A
		SSC-645A SSC-745A
		SSC-622A SSC-722A
		SSC-626A SSC-726A
		SSC-654A SSC-754A
		SSC-601A SSC-701A
		SSC-674A SSC-774A
HOOF		SSC-667A SSC-767A
		SSC-639A SSC-739A
KNIFE		SSC-661A SSC-761A
		SSC-673A SSC-773A

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

MFR-2200 Series Dual Output

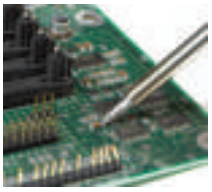
Simultaneous Soldering & Rework Systems



The MFR-2200 Series features dual output capability allowing users to select operation of one hand-piece or two hand-pieces **simultaneously**.

The MFR-2200 Systems below offer a choice of three hand-pieces, however two additional hand-pieces including the desoldering option are also available as upgrade kits (see pages 21 & 23).







Systems	MFR-PS2200 Power Supply	MFR-H1-SC2 Soldering Cartridge Hand-piece	MFR-H2-ST2 Soldering Tip Hand-piece	MFR-H4-TW Tweezer Hand-piece	WS1 Universal Soldering Workstand	MFR-WSPT Tweezer Workstand
Picture Reference		1	2	3		
MFR-2210	1	1			1	
MFR-2220	1		1		1	
MFR-2240	1			1		1
MFR-2211	1	2			2	
MFR-2222	1		2		2	
MFR-2241	1	1		1	1	1

NEW STYLE MFR Tip and Cartridge Hand-pieces.



Slimmer grip for added comfort and handling.



SxP
Soldering Cartridges



RxP
Rework Cartridges

Full range on pages 29-30



SxV
Soldering Tips



CxV
Blade Tips

Full range on pages 26-27





TxP
Tweezer Cartridges

Full range on page 31

MFR-1100 Series Single Output
Soldering & Rework Systems



The MFR-1100 Single Output Series is designed to minimize your training investment, maximize application solutions and increase productivity.

This Series is compact and **versatile** and can be used with either a soldering tip, cartridge or tweezers hand-piece. A shop air desoldering option is also available as an upgrade kit (see pages 21 & 23).



Systems	MFR-PS1100 Power Supply	MFR-H1-SC2 Soldering Cartridge Hand-piece	MFR-H2-ST2 Soldering Tip Hand-piece	MFR-H4-TW Tweezer Hand-piece	MFR-H6-SSC SSC Cartridge Hand-piece	WS1 Soldering Workstand	MFR-WSPT Tweezer Workstand	WS2 Soldering Workstand
Picture Reference		1	2	3	4	5		6
MFR-1110	1	1				1		
MFR-1120	1		1			1		
MFR-1140	1			1			1	
MFR-1160	1				1			1
MFR-1161	1	1			1	1		1

Note: The MFR-1160 replaces the Metcal SP200 Soldering System. The MFR-H6-SSC hand-piece accepts the same SSC cartridges.



SxP
Soldering Cartridges



RxP
Rework Cartridges

Full range on pages 29-30



SxV
Soldering Tips



CxV
Blade Tips

Full range on pages 26-27





TxP
Tweezer Cartridges

Full range on page 31



SSC
Soldering Cartridges (Previous SP200 System)

Full range on page 17

MFR-1100 & MFR-2200 Series

Soldering & Rework Systems



MFR-2200 and MFR-1100 series



MFR-2200, MFR-1100 and MFR-1300 series (shown on page 14)

Key Features & Benefits

- SmartHeat® Technology provides exceptional power for high thermal demand applications
- Single or Dual simultaneous outputs allow for single or dual hand-piece use
- Five hand-pieces available for increased application solutions for soldering, desoldering (upgrade kit) and rework on one system
- Each hand-piece has a comprehensive range of cartridges or tips for maximum flexibility
- Ergonomic hand-pieces for operator safety and comfort

Other Accessories Available:

MFR-CA3	Coil Assembly for Tip Hand-piece (MFR-H2-ST2)
WS1G	Auto-sleep Workstand, Green
MFR-PM70	Power Meter
AC-CP2	Cartridge / Tip Removal Pad
AC-BP	Brass Pad (for Workstand) - Pack of 10

Technical Specifications

Power Supply	**MFR-1100**	**MFR-2200**
Ambient Operating Temperature	10 - 40°C (50°F - 104°F)	10 - 40°C (50°F - 104°F)
Maximum Enclosure Temperature	55°C (131°F)	55°C (131°F)
Input Line Voltage	100 - 240 VAC	100 - 240 VAC
Power Consumption	70 Watts maximum	130 Watts maximum
Input Line Frequency	**50/60 Hz grounded circuit ***	**50/60 Hz grounded circuit ***
Output Power	**60 Watts at 22°C ***	**60 Watts at 22°C per output (2 outputs)***
Output Frequency	450 KHz	450 KHz
Power Cord (3-wire)	183 cm 18/3 SJT	183 cm 18/3 SJT
Dimensions (approx.) W x D x H	90mm (3.5”) x 142mm (5.6”) x 197mm (7.8”)	170mm (7") x 200mm (8") x 152.5mm (6")
Weight	2.3kg (5.05 lbs)	2.97 kg (6.55 lbs)
Surface Resistivity	10^5-10^9 Ohms	10^5-10^9 Ohms
Certification / Marking	cTUVus, CE	cTUVus, CE

Soldering Handle and Coil Assembly		
Tip-to-Ground Potential	< 2 mV RMS	< 2 mV RMS
Tip-to-Ground Resistance	<2 ohms	<2 ohms
Idle Temperature Repeatability	± 1.1°C (2°F) in still air	± 1.1°C (2°F) in still air
Handle Cord Assembly Length	122 cm – burn proof, ESD safe	122 cm – burn proof, ESD safe
Connector	8-pin circular DIN	8-pin circular DIN
Workstand W x D x H	100 mm (4") x 200 mm (8") x 100 mm (4")	100 mm (4") x 200 mm (8") x 100 mm (4")
Workstand Weight	0.69 kg (1.51 lbs)	0.69 kg (1.51 lbs)

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

MFR-1150 Single Output

Soldering & Desoldering Systems with Venturi

The MFR-1150 Desolder System with Venturi Workstand provides a compact and easy **shop air option.**



Key Features & Benefits

- Venturi workstand
- 2 in 1 Desolder hand-piece (Pistol or Pencil)
- **MFR-H5-DS & MFR-WSDSX are compatible for use with all MFR systems (available under MFR-UK5 upgrade kit)**
- Uses DxP desolder cartridges and replaceable coil assembly (MFR-HDCA)

Part No.	Description
MFR-1150	Complete System
Includes:	
MFR-PS1100	Power Supply
MFR-H5-DS	Desolder hand-piece
MFR-WSDSX	Workstand with venturi box for desolder hand-piece
MFR-FTKIT	Fittings and air hose kit
AC-TC	Desolder tip cleaner tool



DxP

Desoldering Tips

Full range on page 31



Collection chamber replacement



Remove grip for Pencil config.

Technical Specifications

	MFR-PS1100 Power Supply
Input Line Voltage	100-240 VAC
Power Consumption	65 Watts max.
Input Line Frequency	**50/60Hz ***
Output Power	**60 Watts Max ***
Output Frequency	450 KHz
Dimensions W x D x H	90mm x 200mm x 152.5mm (3.5" x 8" x 6")

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

	MFR-1150 System
Idle Tip temperature stability	+/- 1.1°C (2°F) in still air
Ambient Operating Temperature	10 - 40°C (50 - 104°F)
Maximum Enclosure Temperature	55°C (131°F)
Tip to ground Potential	<2mV
Tip to ground resistance	<2 Ohms
Surface resistivity	10^5 – 10^9 Ohm
Approvals	cTUVus, CE



MFR-UK5 Upgrade Kit Compatible with all MFR Series Power Supplies

	MFR-H5-DS Desolder Hand-piece
Power Cord (3-wire)	183cm (72")
Solder Hand-piece cable length	152 cm (60"), burn proof, ESD safe
Hand piece connector	8 pin power connector
	MFR-WSDSX Workstand
Input voltage	24V
Intput power	15W
Workstand dimensions	100mm x 200mm x 140mm (4" x 8" x 5.5")
Noise level	< 55 dB
Recommended Air pressure input	550kPa (80PSI) - Shop air only
Vacuum suction force	0.85 bar (25" Hg)

MFR-1300 Dual Switchable Output

Soldering & Desoldering Systems with Internal Air

The MFR-1300 Desoldering and Rework System features a innovative desoldering hand-piece and a power supply with an **internal pump** providing 0.7 bar of vacuum suction force making through-hole desoldering easy.



Key Features & Benefits

- Self-contained powerful vacuum pump
- 2 in 1 ergonomic and flexible hand-piece
- Recyclable collection chamber with increased capacity
- Quick and easy change collection chamber
- Dual switchable output
- Powered by Smartheat® Technology
- Compatible with previous MFR Desolder range

Part No.	Description
MFR-1350	Desolder System with Internal Pump*
MFR-1351	Solder / Desolder System with Internal Pump**
Includes:	
MFR-PS1300	Power Supply
MFR-H5-DS	Desolder hand-piece*
MFR-H1-SC2	Solder Cartridge hand-piece*
MFR-WSDSU	Workstand for Desolder hand-piece*
WS1	Workstand for Solder hand-piece*



SxP
Soldering Cartridges



RxP
Rework Cartridges

Full range on pages 29-30



DxP
Desoldering Tips

Full range on page 31

Technical Specifications

	MFR-1350/51
Input Line Voltage	100-240 VAC
Input Line Frequency	50/60Hz
Power Consumption	110 Watts max. (Power Supply MFR-PS1300)
Output Power	**60 Watts Max ***
Output Frequency	**450 KHz ***
Idle Tip temperature stability	+/- 1.1°C (2°F) in still air
Ambient Operating Temperature	10 - 40°C (50 - 104°F)
Maximum Enclosure Temperature	55°C (131°F)
Noise level	< 55 dB
Vacuum suction force	0.7 bar (21in Hg at Vacuum pump at sea level)
Power Cord (3-wire)	183cm (72")
Desolder Hand-piece cable length	152 cm (60"), burn proof, ESD safe
Solder Hand-piece cable length	122 cm (48"), burn proof, ESD safe
Hand piece connector	8 pin power connector
Tip to ground Potential	<2mV
Tip to ground resistance	<2 Ohms
Surface Resistivity	10^5 – 10^9 Ohms
Approvals	cTUVus, CE
Dimensions (approx.) W x D x H	170mm x 200mm x 152.5mm (7" x 8" x 6")
Workstand dimensions	100mm x 200mm x 100mm (4" x 8" x 4")

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



Pencil



Pistol

Accessories and Spare Parts

For MFR and PS Series















Hand-pieces and replacement coils

PS-HC3		Soldering Handle with PS-CA3 Coil Assembly (PS-900)
PS-H3	1	Soldering Handle without Coil Assembly (PS-900)
PS-CA3	2	Coil Assembly for PS-HC3 / PS-H3 Hand-piece (PS-900)
MFR-H1-SC2	3	Cartridge Solder / Rework Hand-piece (MFR)
MFR-H2-ST2	4	Tip Solder Hand-piece (MFR)
MFR-CA3		Coil Assembly for MFR-H2-ST2 Hand-piece (MFR)
MFR-H4-TW	5	Precision Tweezer Hand-piece (MFR)
MFR-H6-SSC	6	SSC Cartridge Solder Hand-piece (MFR)
MFR-H5-DS	7	Desolder Hand-piece
MFR-HSREC		Cartridge Solder / Rework Hand-piece with long cord (1.83m / 6ft)
MFR-HSRLR	8	Cartridge Solder / Rework Hand-piece with long reach access

Workstands

WS1		Universal Auto Sleep Workstand
WS2		Round Auto Sleep Workstand
WS2-NS	9	Solder Workstand (PS-900)
MFR-WSPT	10	Non Sleeper Precision Tweezer Workstand
MFR-WSDSX	11	Venturi Workstand for Desolder Hand-piece
MFR-WSDSU		Non Sleeper Workstand for Desolder Hand-piece
WS1CB		Solder Rework Cradle Replacement for WS1 Workstand
WS2CB		Solder Rework Cradle Replacement for WS2 Workstand
MFR-WSDSCB		Replacement cradle for all MFR Desolder Workstands
AC-PTP-1		Rubber tip cleaning pad insert* (1)
AC-PTP-3		Rubber tip cleaning pad insert* (3)
AC-PTP-10		Rubber tip cleaning pad insert* (10)

* for all rectangular MFR workstands

Upgrade Kits

MFR-UK1	Solder Cartridge Hand-piece (MFR-H1-SC2) and Workstand (WS1)
MFR-UK2	Solder Tip Hand-piece (MFR-H2-ST2) and Workstand (WS1)
MFR-UK4	Tweezer Cartridge Hand-piece (MFR-H4-DS) and Workstand (MFR-WSPT)
MFR-UK5	Desolder Hand-piece (MFR-H5-DS) and Workstand (MFR-WSDSX)
MFR-UK6	Solder Cartridge Hand-piece (MFR-H6-SSC) and Workstand (MFR-WS2)
MFR-H5-DS-C	Desolder Hand-piece (MFR-H5-DS) and Workstand cradle (MFR-WSDSCB)

Lead-Free Process Identification

WS1G	12	Green Universal Auto Sleep Workstand
WS2G		Green Solder Workstand (PS-900)
WS1CG		Green Solder Rework Cradle Replacement for WS1 Workstand
WS2CG		Green Solder Rework Cradle Replacement for WS2 Workstand
AC-CK1	13	Green Identification Ring for OKi Cartridges (Pack of 50)
AC-CK3		Green Identification Ring for SSC Cartridges (Pack of 50)
AC-CK4	14	Green Identification Ring for OKi Tips (Pack of 50)

Miscellaneous Accessories

AC-BRUSH	15	Soft Brass Brush
AC-CP2		Cartridge and Tip Removal Pad
AC-FX1	16	Fume Extraction Kit
AC-IK		Interlocking / Mounting Kit
MFR-PM70		Power Meter for MFR Series
PS-PM900		Power Meter for PS-900
AC-Y10		Yellow Sponge for WS1 Workstand (Pack of 10)
AC-YS4		Yellow Sponge Round for WS2 Workstand (Pack of 10)
AC-BP		Brass Pad (Pack of 10)

Desoldering Accessories

MFR-DC10	17	Disposable Collection Chamber for MFR-H5-DS (pack of 10)
MFR-DC100		Disposable Collection Chamber for MFR-H5-DS (pack of 100)
MFR-HDCA	18	Coil Assembly for MFR Desolder Hand-piece
MFR-PG		Replacement Pistol grip for MFR-H5-DS Hand-piece
AC-SK1		Seal Kit Collection Chamber (pack of 2)
AC-VP		Vacuum Port
AC-VL		ESD Air Hose
AC-VPF		Vacuum Port Filter (pack of 5)
LM-PS		Power supply for MFR-WSDSX with multi plug adapters
AC-TC		Desoldering Tip Cleaner Tool











PS-900 Production Soldering



The PS-900 provides power and exceptional SmartHeat thermal control in a **small benchtop footprint**.

Key Features & Benefits

- SmartHeat® temperature control
- Ergonomic, lightweight handle
- Rugged cast aluminum housing
- Added plating thickness to tips
- Low cost, quick-change heater coil





Part No.		Description
PS-900		Complete System
Includes:		
PS-PW900	1	Power Supply
PS-HC3	2	Hand-piece (PS-H3) and Coil Assembly (PS-CA3)
WS2-NS	3	Workstand, Black
SFV-CH15A	6	Economical and Affordable Chisel Solder Tip 1.5mm (.06")
Other Accessories Available:		
PS-H3	4	Hand-piece only, NO PS-CA3 Coil Assembly
PS-CA3	5	Coil Assembly for SxV Soldering Tips and CxV Blade Tips ONLY
WS2		Auto-sleep Workstand, Black
WS2G		Auto-sleep Workstand, Green
AC-CP2		Tip Removal Pad







SxV
Soldering Tips

Full range on pages 26-27



CxV
Blade Tips

Full range on page 27

ONLY AVAILABLE ON PS-900 SYSTEM AND FOR USE WITH PHT TIPS

PS-CA1	7	Coil Assembly for PHT Soldering Tips ONLY
PS-HC1		Hand-piece (PS-H3) and Coil Assembly (PS-CA1)
PS-H3	8	Hand-piece only, NO PS-CA1 Coil Assembly





PHT
Light Load, Fine Access Soldering Tips

Full range on page 28



PS-900 Production Soldering

Technical Specifications

Power Supply	
Ambient Operating Temperature	10 - 40°C
Maximum Enclosure Temperature	65°C
Input Line Voltage	100 - 240 VAC
Power Consumption	90 Watts max.
Input Line Frequency	**50/60 Hz ***
Output Power	**60 Watts max.***
Output Frequency	450 KHz
Power Cord (3-wire)	183 cm 18/3 SJT
Dimensions W x D x H	80 x 160 x 115 mm (3.1" x 6.3" x 4.5")

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

Soldering Handle and Coil Assembly	
Tip-to-Ground Potential	< 2 mV
Tip-to-Ground Resistance	< 2 ohms
Idle Temperature Repeatability	± 1.1°C in still air
Handle Cord Assembly Length	122 cm – burn proof, ESD safe
Connector	3-pin power connector
Overall length (with tip)	230 mm (9.06") with standard tips
Grip diameter	13 mm (0.51")
Tip to grip	58 mm (2.28")
Tip shaft diameter	8.0 mm (0.31")
Tip length	82 mm (3.23") to 93 mm (3.66") (typical)
Workstand W x D x H	105 x 175 x 90 mm (4.1" x 6.9" x 3.5")



Tip Soldering Hand-Piece with PS-CA3 Coil Assembly

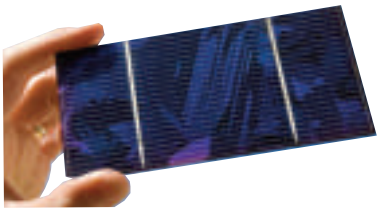
PS-900-Solar

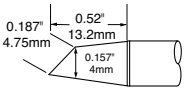


Key Features & Benefits

- Superior photo voltaic tabbing and buss soldering
- SmartHeat reduces thermal stress on solar cells
- Reduces the likelihood of micro-cracking
- Produces a controlled, high quality solder joint
- Calibration-free system
- Specially designed STV-DRH440A hoof tip for high performance







STV-DRH440A
Hoof Tip 4mm (.157")

Part No.	Includes
PS-900-Solar	PS-PW900 Power Supply, PS-900-PC9 Hand-piece with long cord (274cm / 9ft) & PS-CA3 Coil Assembly, STV-DRH440A soldering tip, WS2-NS Workstand, AC-CP2 tip removal pad



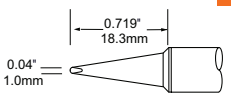
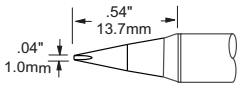
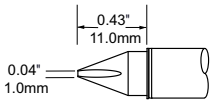
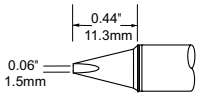
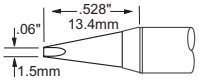
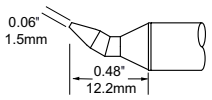
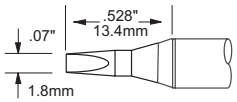
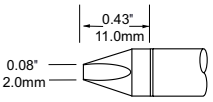
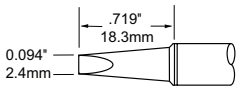
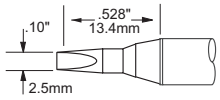
SxV
Soldering Tips

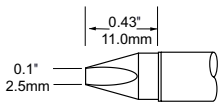
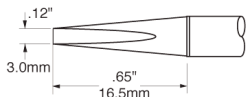
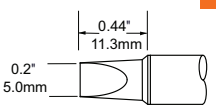
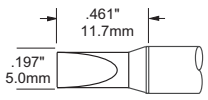
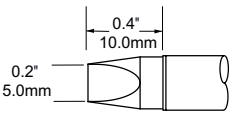
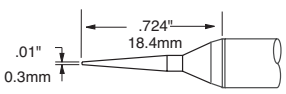
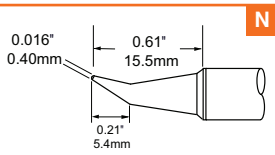
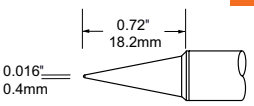
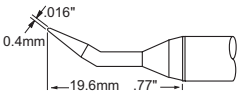
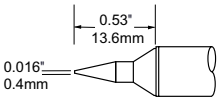
Full range on pages 26-27

SxV Soldering Tips



Compatible with: PS-900, MFR-1120, MFR-2220, MFR-2222 Systems,
PS-HC3, MFR-H2-ST and MFR-H2-ST2 hand-pieces, PS-CA3, MFR-CA2 and MFR-CA3 Coil Assemblies

	SxV Soldering Tips	
CHISEL	NEW 	SFV-CH10A STV-CH10A SCV-CH10A
		SFV-CH10AR STV-CH10AR SCV-CH10AR
		SFV-CH10 STV-CH10 SCV-CH10
	NEW 	SFV-CH15A STV-CH15A SCV-CH15A
		SFV-CH15AR STV-CH15AR SCV-CH15AR
		SFV-CHB15 STV-CHB15 SCV-CHB15
		SFV-CH18AR STV-CH18AR SCV-CH18AR
		SFV-CH20 STV-CH20 SCV-CH20
	NEW 	SFV-CH24A STV-CH24A SCV-CH24A
		SFV-CH25AR STV-CH25AR SCV-CH25AR

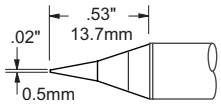
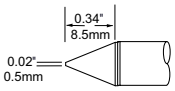
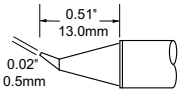
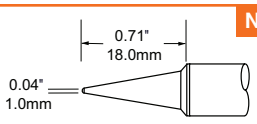
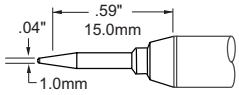
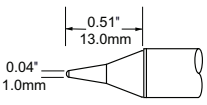
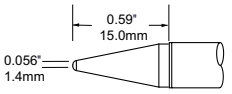
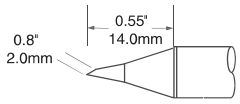
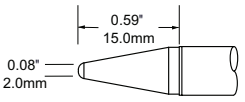
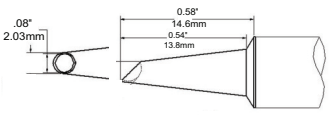
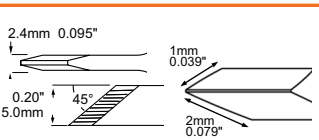
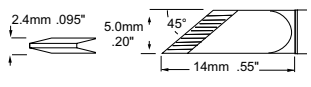
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		SFV-CH50AR STV-CH50AR SCV-CH50AR
		SFV-CH50 STV-CH50 SCV-CH50
CONICAL		SFV-CNL03AR STV-CNL03AR SCV-CNL03AR
	NEW 	SFV-CNB04A STV-CNB04A SCV-CNB04A
	NEW 	SFV-CN05A STV-CN05A SCV-CN05A
		SFV-CNB04AR STV-CNB04AR SCV-CNB04AR
		SFV-CNL04 STV-CNL04 SCV-CNL04

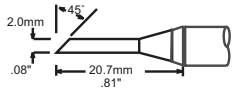
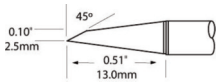
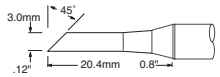
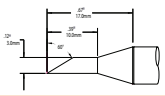
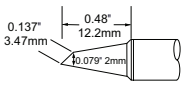
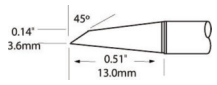
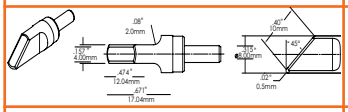
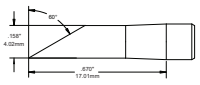
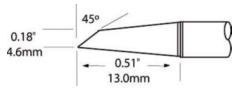
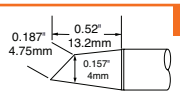
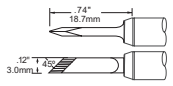
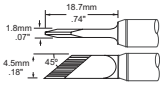
F = FR4 / Fiber Glass, for most standard applications **T** = Temperature Sensitive **C** = Ceramic for high thermal demand applications.

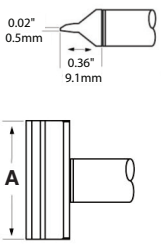
SxV Soldering Tips
CxV Blade Tips



Compatible with: PS-900, MFR-1120, MFR-2220, MFR-2222 Systems,
PS-HC3, MFR-H2-ST and MFR-H2-ST2 hand-pieces, PS-CA3, MFR-CA2 and MFR-CA3 Coil Assemblies

	SxV Soldering Tips	
CONICAL		SFV-CN05AR STV-CN05AR SCV-CN05AR
		SFV-CN05 STV-CN05 SCV-CN05
		SFV-CNB05 STV-CNB05 SCV-CNB05
	NEW 	SFV-CNL10A STV-CNL10A SCV-CNL10A
		SFV-CNL10AR STV-CNL10AR SCV-CNL10AR
		SFV-CNL10 STV-CNL10 SCV-CNL10
		SFV-CNL14 STV-CNL14 SCV-CNL14
		SFV-DRH20 STV-DRH20 SCV-DRH20
		SFV-CNL20 STV-CNL20 SCV-CNL20
		SFV-WV20 STV-WV20 SCV-WV20
KNIFE		SFV-DRK45A STV-DRK45A SCV-DRK45A
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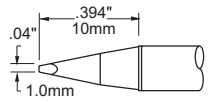
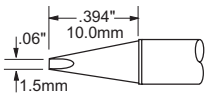
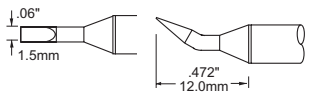
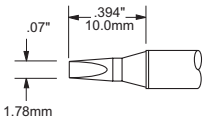
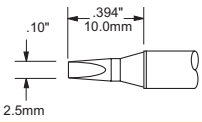
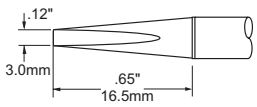
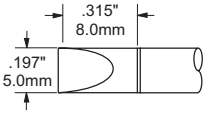
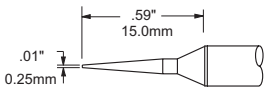
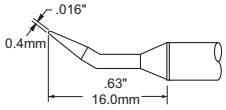
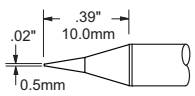
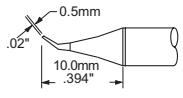
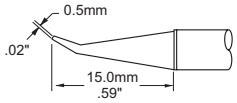
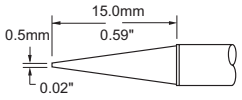
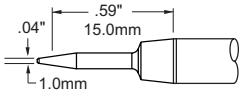
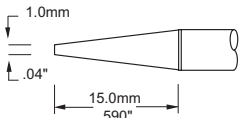
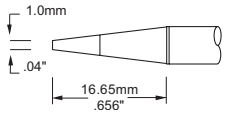
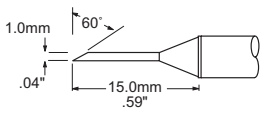
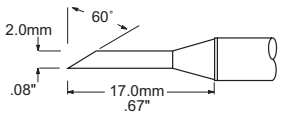
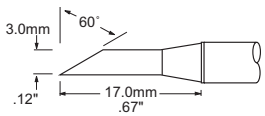
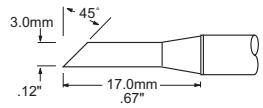
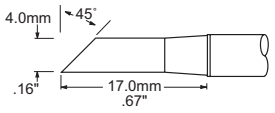
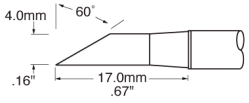
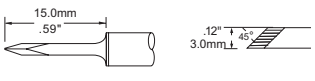
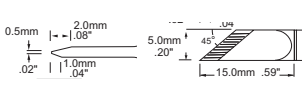
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		SFV-DRH430AR STV-DRH430AR SCV-DRH430AR
		SFV-DRH630AR STV-DRH630AR SCV-DRH630AR
	NEW 	SFV-DRH420A STV-DRH420A SCV-DRH420A
		SFV-DRH30CP STV-DRH30CP SCV-DRH30CP
		SFV-DRH440R STV-DRH440R SCV-DRH440R
		SFV-DRH640AR STV-DRH640AR SCV-DRH640AR
		SFV-DRH40CP STV-DRH40CP SCV-DRH40CP
	NEW 	SFV-DRH440A STV-DRH440A SCV-DRH440A
		SFV-DRK30AR STV-DRK30AR SCV-DRK30AR
		SFV-DRK45AR STV-DRK45AR SCV-DRK45AR

CxV Blade Tips			A
NEW 	CFV-BL100	CCV-BL100	10mm (.40")
	CFV-BL250	CCV-BL250	25mm (1")
	CFV-BL350	CCV-BL350	35mm (1.4")
	CFV-BL400	CCV-BL400	40mm (1.6")
	CFV-BL500	CCV-BL500	50mm (2")

F = FR4 / Fiber Glass, for most standard applications **T** = Temperature Sensitive **C** = Ceramic for high thermal demand applications.

PHT Soldering Tips



PHT Soldering Tips	Compatible with: PS-800, PS-800E and PS-900 Systems and PS-CA1 Coil Assembly
CHISEL	
	PHT-750315 PHT-650315
	PHT-750325 PHT-650325
	PHT-750326 PHT-650326
	PHT-750335 PHT-650335
	PHT-751355 PHT-651355
	PHT-751367 PHT-651367
CONICAL	
	PHT-751384 PHT-651384
	PHT-752017 PHT-652017
	PHT-752327 PHT-652327
	PHT-752035 PHT-652035
	PHT-752335 PHT-652335
	PHT-752337 PHT-652337
CONICAL	
	PHT-753035 PHT-653035
	PHT-752057 PHT-652057
	PHT-753067 PHT-653067
	PHT-753077 PHT-653077
HOOF	
	PHT-754627 PHT-654627
	PHT-754667 PHT-654667
	PHT-754687 PHT-654687
	PHT-754487F PHT-654487F
	PHT-654497 PHT-754497
	PHT-654697
KNIFE	
	PHT-755437 PHT-655437
	PHT-755477 PHT-655477

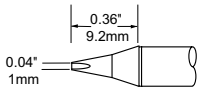
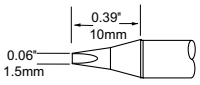
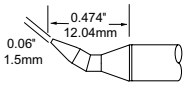
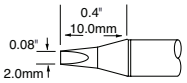
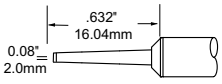
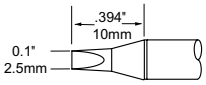
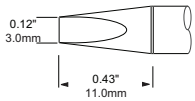
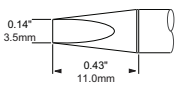
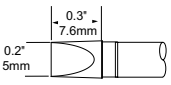
75 = 750 Series for most standard applications - 65 = 650 Series for temperature sensitive applications

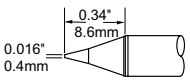
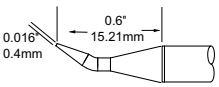
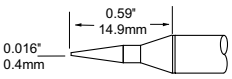
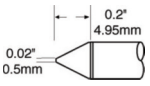
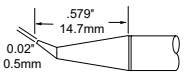
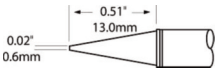
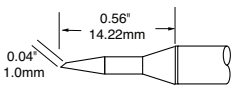
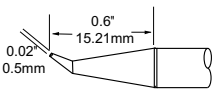
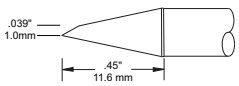
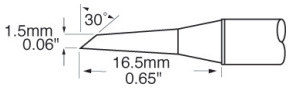
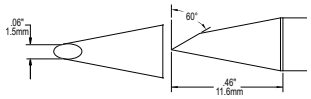
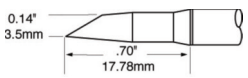
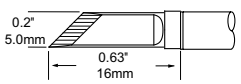
SxP Soldering & Rework Cartridges



SxP Soldering & Rework Cartridges

Compatible with: MFR-1110, MFR-1161, MFR-1351, MFR-2211, MFR-2241 Systems and MFR-H1-SC hand-piece

CHISEL		SFP-CH10 STP-CH10 SCP-CH10
		SFP-CH15 STP-CH15 SCP-CH15
		SFP-CHB15 STP-CHB15 SCP-CHB15
		SFP-CH20 STP-CH20 SCP-CH20
		SFP-CHL20 STP-CHL20 SCP-CHL20
		SFP-CH25 STP-CH25 SCP-CH25
		SFP-CH30 STP-CH30 SCP-CH30
		SFP-CH35 STP-CH35 SCP-CH35
		SFP-CH50 STP-CH50 SCP-CH50

CONICAL		SFP-CN04 STP-CN04 SCP-CN04
		SFP-CNB04 STP-CNB04 SCP-CNB04
		SFP-CNL04 STP-CNL04 SCP-CNL04
		SFP-CN05 STP-CN05 SCP-CN05
		SFP-CNB05 STP-CNB05 SCP-CNB05
		SFP-CNL06 SCP-CNL06
BEVEL		SFP-BVL10 STP-BVL10 SCP-BVL10
HOOF		SFP-DRH05 STP-DRH05 SCP-DRH05
		SFP-DRH610 STP-DRH610 SCP-DRH610
		SFP-DRH15 STP-DRH15 SCP-DRH15
		SFP-DRH615 STP-DRH615 SCP-DRH615
		SFP-DRH35 STP-DRH35 SCP-DRH35
KNIFE		SFP-DRK50 STP-DRK50 SCP-DRK50

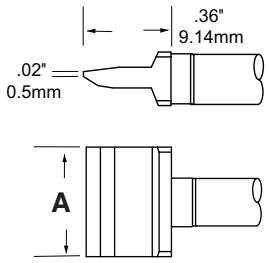
F = FR4 / Fiber Glass, for most standard applications **T** = Temperature Sensitive **C** = Ceramic for high thermal demand applications.

RxP Rework Cartridges

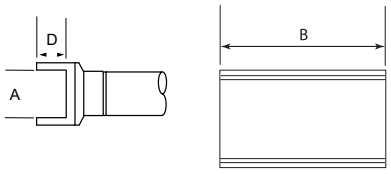
Compatible with: MFR-1110, MFR-1161, MFR-1351, MFR-2211, MFR-2241 Systems, MFR-H1-SC and MFR-H1-SC2 hand-pieces. All dimensions shown are in mm (inches)

RxP Rework Cartridges

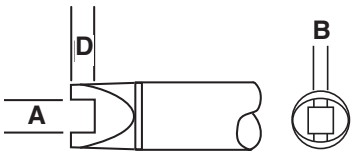
BLADE



TUNNEL

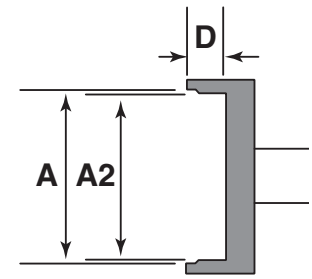


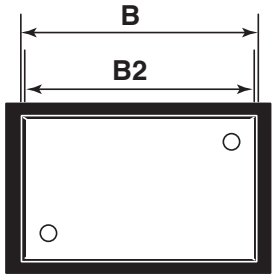
SLOT



	A	B	D	SMT TYPE
RFP-BL1 RCP-BL1	10 (0.41)	-	-	-
RFP-BL2 RCP-BL2	15.6 (0.62)	-	-	-
RFP-BL3 RCP-BL3	22.1 (0.87)	-	-	-
RFP-DL1 RCP-DL1	5.18 (0.204)	10.16 (0.40)	3.22 (0.127)	Tunnel SOIC-14-16
RFP-DL2 RCP-DL2	5.18 (0.204)	4.32 (0.17)	2.29 (.09)	Tunnel SOIC-8
RFP-DL3 RCP-DL3	6.86 (.270)	11.15 (0.44)	2.29 (.09)	Tunnel SOIC-16
RFP-SL1 RCP-SL1	2.34 (.092)	1.37 (.054)	1.78 (.07)	0805 Chip Package
RFP-SL2 RCP-SL2	3.48 (.137)	1.63 (.064)	1.78 (.07)	1206 Chip Package

QUAD





	A	A2	D	B	B2	SMT TYPE
RFP-QD4 RCP-QD4	12.70 (.500)	11.43 (.450)	3.81 (.150)	15.24 (.600)	13.97 (.550)	PLCC 32
RFP-QD6 RCP-QD6	17.78 (.700)	16.76 (.660)	3.81 (.150)	17.78 (.700)	16.76 (.660)	PLCC 44
RFP-QD7 RCP-QD7	25.27 (.995)	24.38 (.960)	5.59 (.220)	25.27 (.995)	24.38 (.960)	PLCC 68
RFP-QD10 RCP-QD10	20.32 (.800)	19.30 (.760)	3.81 (.150)	20.32 (.800)	19.30 (.760)	PLCC 52
RFP-QD15 RCP-QD15	13.34 (.525)	12.32 (.485)	2.79 (.110)	13.34 (.525)	12.32 (.485)	TQFP 80
RFP-QD19 RCP-QD19	16.13 (.635)	16.13 (.635)	3.30 (.130)	16.13 (.635)	16.13 (.635)	QFP 44
RFP-QD20 RCP-QD20	16.51 (.650)	16.51 (.650)	3.30 (.130)	22.48 (.885)	22.48 (.885)	QFP 100

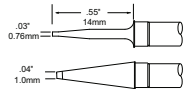
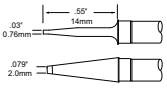
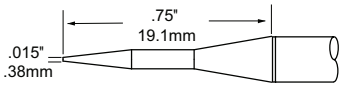
F = FR4 / Fiber Glass, for most standard applications **T** = Temperature Sensitive **C** = Ceramic for high thermal demand applications.

TxP Tweezer Cartridges
DxP Desoldering Tips

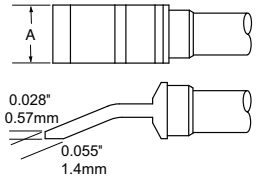
TxP Tweezer Cartridges

Compatible with: MFR-1140, MFR-2240, MFR2241 Systems and MFR-H4-TW hand-piece

BLADE

	TFP-BLP1 TTP-BLP1 TCP-BLP1	1.0mm x 14mm (.04" x .55")
	TFP-BLP2 TTP-BLP2 TCP-BLP2	2.0mm x 14mm (.08" x .55")
	TFP-CNP1 TTP-CNP1 TCP-CNP1	Conical 0.4mm x 19.1mm (.015" x .75")

HEAVY DUTY



	A
TFP-BLH40 TTP-BLH40 TCP-BLH40	6.35mm (.25")
TFP-BLH50 TTP-BLH50 TCP-BLH50	16mm (.62")
TFP-BLH60 TTP-BLH60 TCP-BLH60	20.5mm (.81")
TFP-BLH70 TTP-BLH70 TCP-BLH70	28mm (1.1")

DxP Desoldering Tips

Compatible with: MFR-1150, MFR-1350, MFR-1351 systems with MFR-H5-DS hand-piece and previous MFR-DSX, -DSI, -SDX, -SDI Systems with MFR-HDS hand-piece.
All dimensions shown are in mm (inches)





Standard



Long Reach

	A	B	TYPE
DFP-CN2 DCP-CN2	0.64 (.025)	1.78 (.070)	Standard
DFP-CN3 DCP-CN3	0.76 (.030)	2.03 (.080)	Standard
DFP-CN4 DCP-CN4	1.02 (.040)	2.28 (.090)	Standard
DFP-CN5 DCP-CN5	1.27 (.050)	2.64 (.104)	Standard
DFP-CN6 DCP-CN6	1.52 (.060)	2.84 (.112)	Standard
DFP-CN7 DCP-CN7	2.41 (.095)	3.63 (.143)	Standard
DFP-CNL3 DCP-CNL3	0.76 (.030)	2.03 (.080)	Long Reach
DFP-CNL4 DCP-CNL4	1.02 (.040)	2.28 (.090)	Long Reach
DFP-CNL5 DCP-CNL5	1.27 (.050)	2.64 (.104)	Long Reach

F = FR4 / Fiber Glass, for most standard applications **T** = Temperature Sensitive **C** = Ceramic for high thermal demand applications.

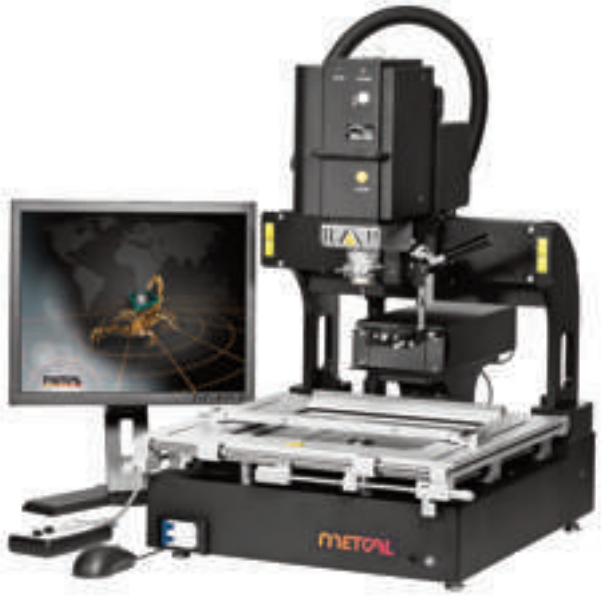
Convection Rework Overview

SYSTEMS SERIES

MANUAL AND MODULAR SYSTEMS



MRS-1100A Modular Rework System



APR Scorpion Rework Systems

FOR SMALL TO MEDIUM

HANDHELD SERIES

PRE-HEATERS



PCT-1000 Programmable Pre-Heater



PCT-100 Pre-Heater

DIGITAL

ANALOG

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