# Hand Soldering, Desoldering &

| Single Port | | Dual Port Switchable | |
|---|---|---|---|
| PS-900 | MFR-1100 Series | 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.

Powered by METCAL SmartHeat®

# Rework Systems Overview

## Dual Port Simultaneous

MFR-2200 Series

MX-5200 Series

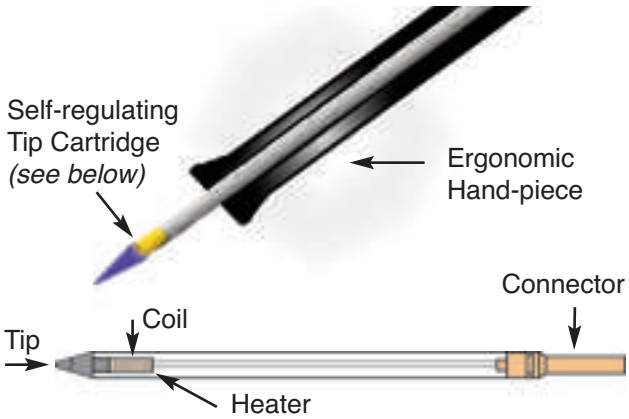
R E W O R K  S Y S T E M S

NEW STYLE

MFR Hand-pieces

Also compatible with the New MX-500 System

MX Hand-pieces



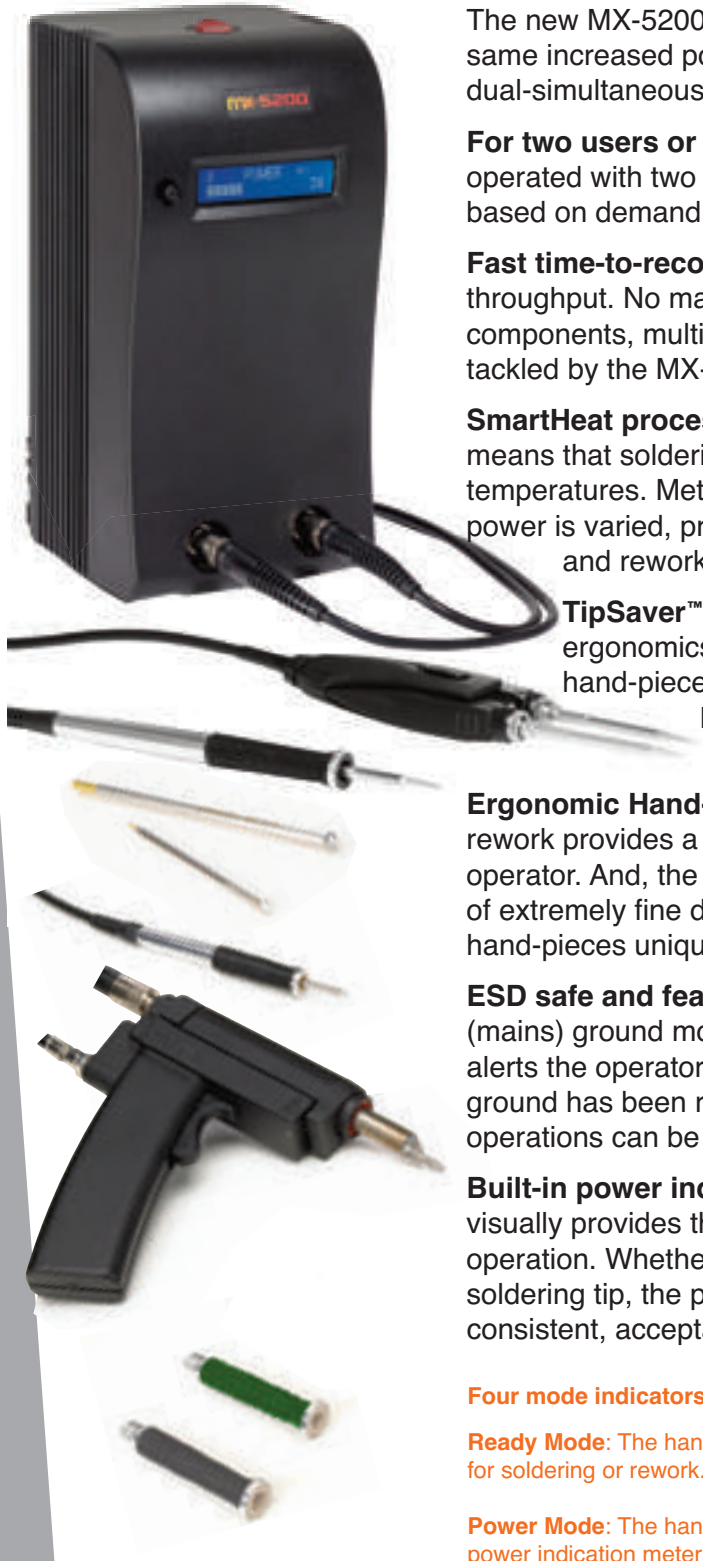

### SmartHeat® Soldering Technology = Variable Power / Fixed Temperature

- 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

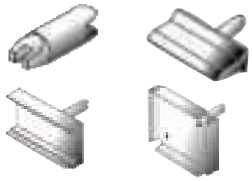
Desoldering cartridges:
STDC Series
Soldering cartridges:
STTC and SMTC Series.
NOTE: Unit requires shop air for desoldering.

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 *** <br> **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) |

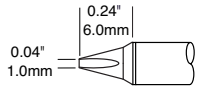
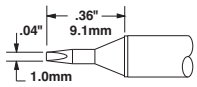
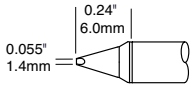
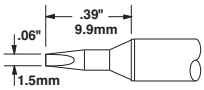
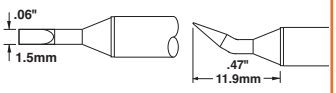
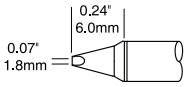
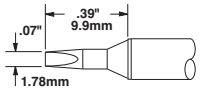
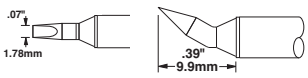
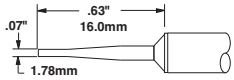
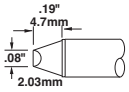
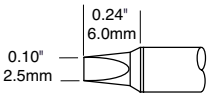
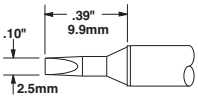
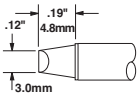
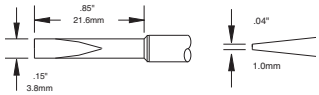
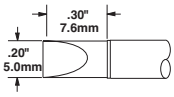
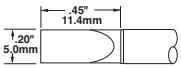
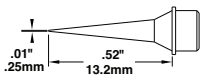
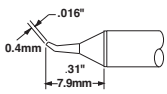
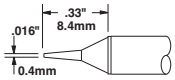
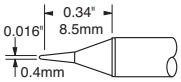
*** RF SmartHeat Technology provides greater power. More details at www.metcal.com/smartheat**

## 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) |

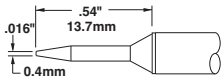
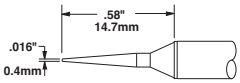
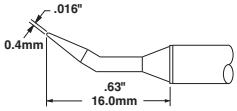
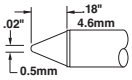
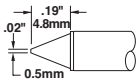
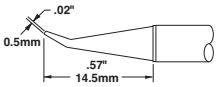
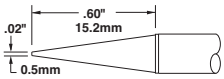
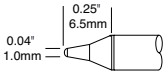
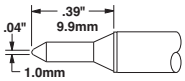
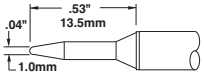
*** RF SmartHeat Technology provides greater power. More details at www.metcal.com/smartheat**

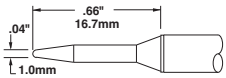
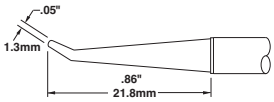
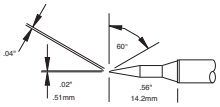
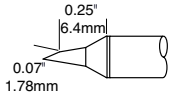
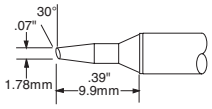
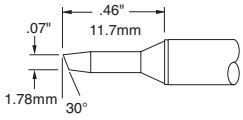
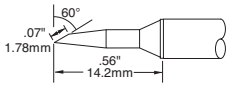
# STTC Soldering Cartridges

| STTC Soldering Cartridges | Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces |
|---|---|
| CHISEL   | STTC-125P<br>STTC-825P |
|   | STTC-525<br>STTC-025<br>STTC-125<br>STTC-825 |
|   | STTC-138P<br>STTC-838P |
|   | STTC-538<br>STTC-038<br>STTC-138<br>STTC-838 |
|   | STTC-599<br>STTC-099<br>STTC-199<br>STTC-899 |
|   | STTC-137P<br>STTC-837P |
|   | STTC-537<br>STTC-037<br>STTC-137<br>STTC-837 |
|   | STTC-598<br>STTC-098<br>STTC-198<br>STTC-898 |
|   | STTC-542<br>STTC-042<br>STTC-142<br>STTC-842 |
|   | STTC-514<br>STTC-014<br>STTC-114 |
| CHISEL   | STTC-136P<br>STTC-836P |
|   | STTC-536<br>STTC-036<br>STTC-136<br>STTC-836 |
|   | STTC-513<br>STTC-013<br>STTC-113<br>STTC-813 |
|   | STTC-020<br>STTC-120<br>STTC-820 |
|   | STTC-517<br>STTC-017<br>STTC-117<br>STTC-817 |
|   | STTC-565<br>STTC-065<br>STTC-165<br>STTC-865 |
| CONICAL   | STTC-590<br>STTC-090<br>STTC-190<br>STTC-890 |
|   | STTC-526<br>STTC-026<br>STTC-126<br>STTC-826 |
|   | STTC-522<br>STTC-022<br>STTC-122<br>STTC-822 |
|   | STTC-145P<br>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.**

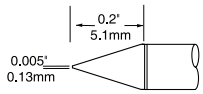
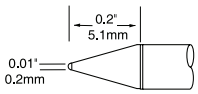
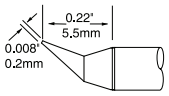
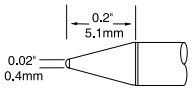
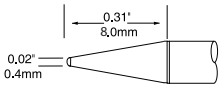
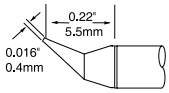
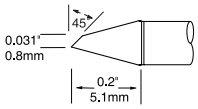
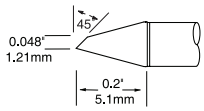
# STTC Soldering Cartridges

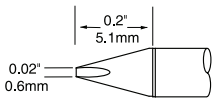
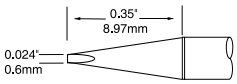
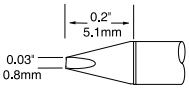
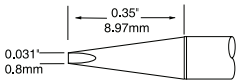
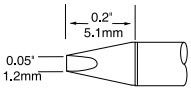
| STTC Soldering Cartridges | Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces |
|---|---|
| CONICAL   | STTC-506<br>STTC-006<br>STTC-106<br>STTC-806 |
|   | STTC-545<br>STTC-045<br>STTC-145<br>STTC-845 |
|   | STTC-540<br>STTC-040<br>STTC-140<br>STTC-840 |
|   | STTC-511<br>STTC-011<br>STTC-111 |
|   | STTC-516<br>STTC-016<br>STTC-116<br>STTC-816 |
|   | STTC-544<br>STTC-044<br>STTC-144<br>STTC-844 |
|   | STTC-543<br>STTC-043<br>STTC-143<br>STTC-843 |
|   | STTC-101P<br>STTC-801P |
|   | STTC-531<br>STTC-031<br>STTC-131 |
|   | STTC-501<br>STTC-001<br>STTC-101 |

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

| | UFTC UltraFine Soldering Cartridges | Compatible with: MX-500, MX-5000 and MX-5200 Systems and MX-H2-UF hand-piece |
|---|---|---|
| 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 |

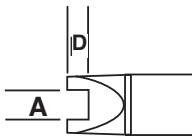
**7 = 700 Series for most standard applications**

# SMTC Rework Cartridges

**SMTC Rework Cartridges**

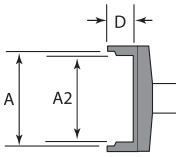
Compatible with: MX-500, MX-5000 and MX-5200 Systems / MX-RM3E and MX-H1-AV hand-pieces
All dimensions shown are in mm (inches)

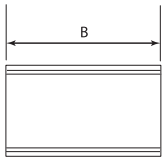
## SLOT



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

## TUNNEL

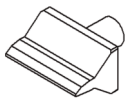



| | A | A2 | D | B | SMT TYPE |
|---|---|---|---|---|---|
| SMTC-004<br>SMTC-104 | 5.08<br>(.20) | 5.08<br>(.20) | 2.3<br>(.90) | 4.32<br>(.17) | SOIC-8 |
| SMTC-006<br>SMTC-106 | 5.08<br>(.20) | 5.08<br>(.20) | 2.3<br>(.90) | 10.16<br>(.40) | SOIC-14,<br>16 |
| SMTC-0142<br>SMTC-1142 | 5.18<br>(.204) | 5.18<br>(.204) | 2.54<br>(.100) | 8.89<br>(.350) | SOIC-14 |
| SMTC-047<br>SMTC-147 | 8.51<br>(.335) | 8.51<br>(.335) | 5.08<br>(.200) | 6.35<br>(.250) | DPAC |
| SMTC-126 | 8.64<br>(.340) | 8.0<br>(.315) | 1.88<br>(.074) | 18.8<br>(.740) | SOJ-28,<br>SOM-32 |
| SMTC-007<br>SMTC-107 | 9.53<br>(.375) | 9.53<br>(.375) | 3.20<br>(.125) | 18.3<br>(.720) | SOIC-28 |
| SMTC-009<br>SMTC-109 | 9.53<br>(.375) | 9.53<br>(.375) | 3.18<br>(.125) | 15.75<br>(.620) | SOIC-24 |
| SMTC-010<br>SMTC-110 | 9.53<br>(.375) | 9.53<br>(.375) | 3.20<br>(.125) | 13.20<br>(.520) | SOIC-20 |
| SMTC-040<br>SMTC-140 | 11.43<br>(.450) | 10.40<br>(.410) | 1.90<br>(.075) | 25.9<br>(1.02) | SOJ-40,<br>SOM-32 |

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

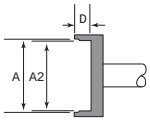
# SMTC Rework Cartridges

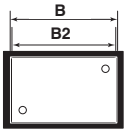


## SMTC Rework Cartridges

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)

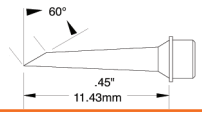
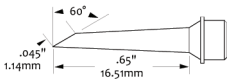
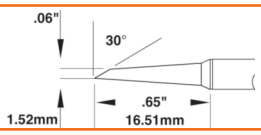
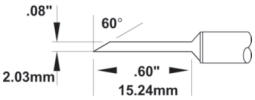
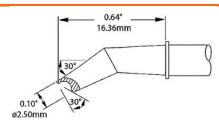
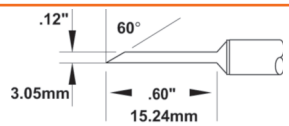
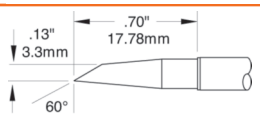
### QUAD



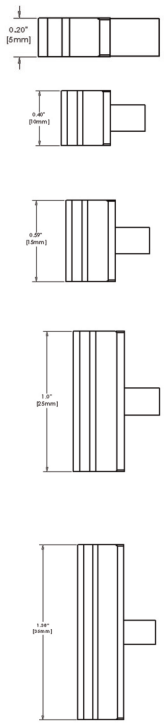




| | A | A2 | D | B | B2 | SMT TYPE |
|---|---|---|---|---|---|---|
| SMTC-0121<br>SMTC-1121 | 8.38<br>(.330) | 8.38<br>(.330) | 2.54<br>(.100) | 8.38<br>(.330) | 8.38<br>(.330) | SQFP 48<br>(EIJA) |
| SMTC-0112<br>SMTC-1112 | 10.16<br>(.400) | 9.14<br>(.360) | 3.80<br>(.150) | 10.16<br>(.400) | 9.14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

### HOOF

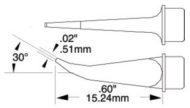
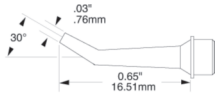
| | |
|---|---|
|   | SMTC-5175<br>SMTC-0175<br>SMTC-1175<br>SMTC-8175 |
|   | SMTC-5174<br>SMTC-0174<br>SMTC-1174<br>SMTC-8174 |
|   | SMTC-5167<br>SMTC-0167<br>SMTC-1167 |
|   | SMTC-5169<br>SMTC-0169<br>SMTC-1169 |
|   | SMTC-0183<br>SMTC-1183<br>SMTC-8183 |
|   | SMTC-0170<br>SMTC-1170 |
|   | SMTC-5147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

### BLADE

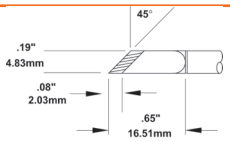
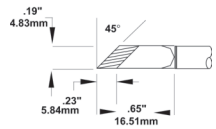
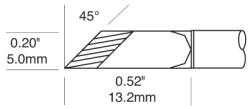


| | A | BLADE TYPE |
|---|---|---|
| SMTC-064<br>SMTC-164 | 5mm<br>(.20") | Short |
| SMTC-560<br>SMTC-060<br>SMTC-160<br>SMTC-860 | 10mm<br>(.40") | Long |
| SMTC-561<br>SMTC-061<br>SMTC-161<br>SMTC-861 | 15.75mm<br>(.62") | Long |
| SMTC-562<br>SMTC-062<br>SMTC-162<br>SMTC-862 | 22mm<br>(.86") | Long |
| | **A** | **BLADE TYPE** |
| SMTC-0BL050<br>SMTC-1BL050<br>SMTC-8BL050 | 5mm<br>(.20") | Short |
| SMTC-0BL100<br>SMTC-1BL100<br>SMTC-8BL050 | 10mm<br>(.40") | Short |
| SMTC-0BL150<br>SMTC-1BL150<br>SMTC-8BL150 | 15mm<br>(.59") | Short |
| SMTC-0BL250<br>SMTC-1BL250<br>SMTC-8BL250 | 25mm<br>(1.0") | Long |
| SMTC-0BL350<br>SMTC-1BL350<br>SMTC-8BL350 | 35mm<br>(1.38") | Long |

### HOOK & CONICAL

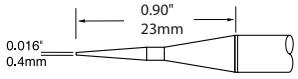
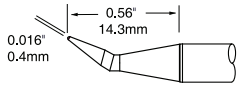
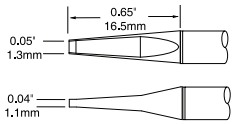
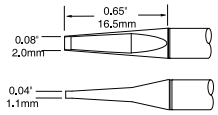
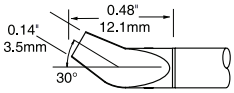
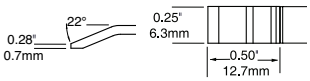
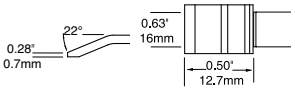
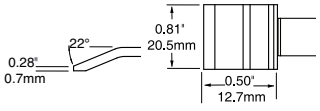
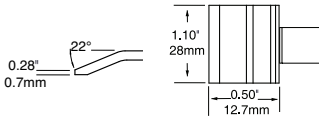
| | |
|---|---|
|   | SMTC-5172<br>SMTC-0172<br>SMTC-1172<br>SMTC-8172 |
|   | SMTC-5171<br>SMTC-0171<br>SMTC-1171<br>SMTC-8171 |

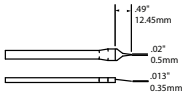
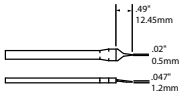
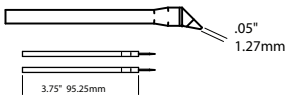
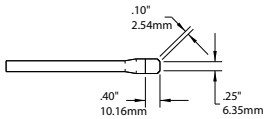
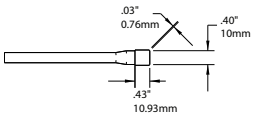
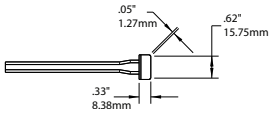
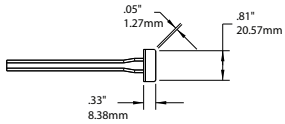
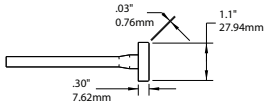
### KNIFE

| | |
|---|---|
|   | SMTC-5161<br>SMTC-0161<br>SMTC-1161 |
|   | SMTC-5173<br>SMTC-1173<br>SMTC-8173 |
|   | STTC-1173P<br>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<br>PTTC-701<br>PTTC-801 |
| CONICAL |  | PTTC-701B<br>PTTC-801B |
| BLADE |  | PTTC-602<br>PTTC-702<br>PTTC-802 |
| BLADE |  | PTTC-603<br>PTTC-703<br>PTTC-803 |
| |  | PTTC-608B<br>PTTC-708B<br>PTTC-808B |
| |  | PTTC-604<br>PTTC-704<br>PTTC-804 |
| |  | PTTC-605<br>PTTC-705<br>PTTC-805 |
| |  | PTTC-606<br>PTTC-706<br>PTTC-806 |
| |  | PTTC-607<br>PTTC-707<br>PTTC-807 |

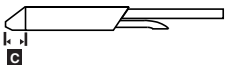
| TATC Talon Cartridges | Compatible with: MX-500 Systems and MX-Talon hand-piece |
|---|---|
|  | TATC-609 |
|  | TATC-601 |
|  | TATC-608 |
|  | TATC-602 |
|  | TATC-605 |
|  | TATC-603 |
|  | TATC-604 |
|  | TATC-606 |

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

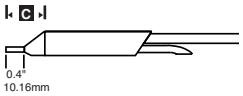
# STDC Desolder Cartridges

**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

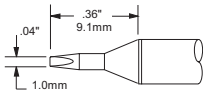
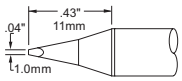
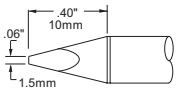
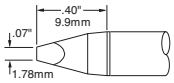
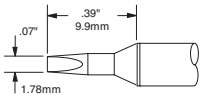
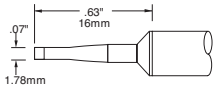
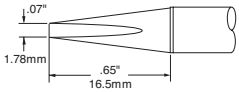
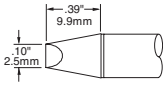
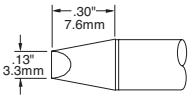
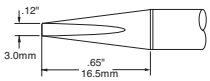
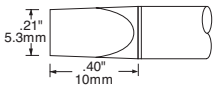
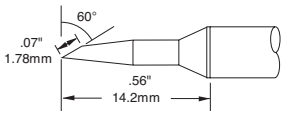
| | A | B | C | TYPE |
|---|---|---|---|---|
| STDC-102<br>STDC-802 | 0.64<br>(.025) | 1.40<br>(.055) | 11.43<br>(.45) | Standard |
| STDC-103<br>STDC-803 | 0.76<br>(.029) | 1.68<br>(.066) | 11.17<br>(.44) | Standard |
| STDC-104<br>STDC-804 | 1.02<br>(.04) | 1.78<br>(.07) | 10.92<br>(.43) | Standard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

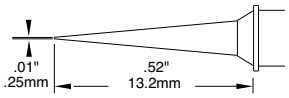
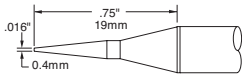
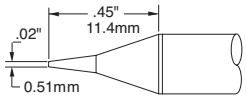
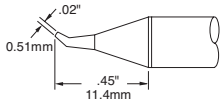
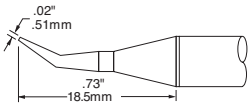
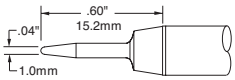
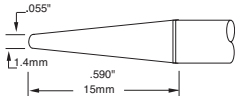
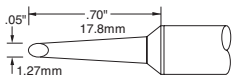
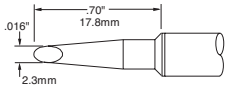
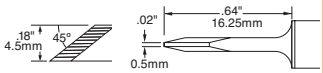
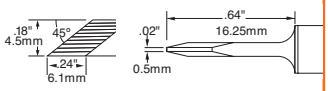
**1 = 700 Series (standard length) and 7 = 700 Series (long reach) for most standard applications.**
**8 = 800 Series for Ceramic and high thermal demand applications.**

# 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<br>SSC-771A |
| |  | SSC-625A<br>SSC-725A |
| |  | SSC-638A<br>SSC-738A |
| |  | SSC-637A<br>SSC-737A |
| |  | SSC-672A<br>SSC-772A |
| |  | SSC-642A<br>SSC-742A |
| |  | SSC-670A<br>SSC-770A |
| |  | SSC-636A<br>SSC-736A |
| |  | SSC-613A<br>SSC-713A |
| |  | SSC-646A<br>SSC-746A |
| |  | SSC-617A<br>SSC-717A |
| BEVEL |  | SSC-647A<br>SSC-747A |

| | | |
|---|---|---|
| CONICAL |  | SSC-690A<br>SSC-790A |
| |  | SSC-645A<br>SSC-745A |
| |  | SSC-622A<br>SSC-722A |
| |  | SSC-626A<br>SSC-726A |
| |  | SSC-654A<br>SSC-754A |
| |  | SSC-601A<br>SSC-701A |
| |  | SSC-674A<br>SSC-774A |
| HOOF |  | SSC-667A<br>SSC-767A |
| |  | SSC-639A<br>SSC-739A |
| KNIFE |  | SSC-661A<br>SSC-761A |
| |  | SSC-673A<br>SSC-773A |

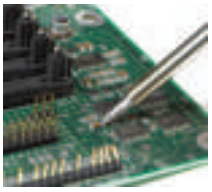
6 = 600 Series for temperature sensitive applications - 7 = 700 Series for most standard applications.

# 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

### 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**

Collection chamber replacement

| | **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 |

Remove grip for Pencil config.

**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**

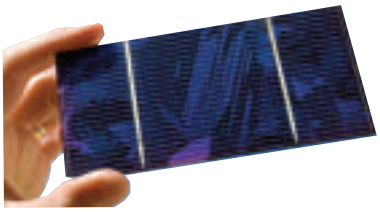
| **Soldering Handle and Coil Assembly** | |
|---|---|
| Tip-to-Ground Potential | < 2 mV |
| Tip-to-Ground Resistance | < 2 ohms |
| Idle Temperature Repeatability | ± 1.1°C in still air |
| Handle Cord Assembly Length | 122 cm – burn proof, ESD safe |
| Connector | 3-pin power connector |
| Overall 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") |

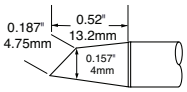
Tip Soldering Hand-Piece with PS-CA3 Coil Assembly

## 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 | |
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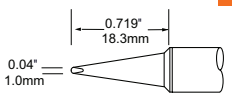
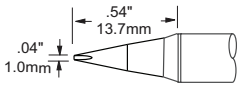
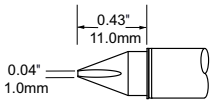
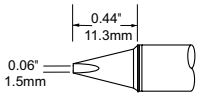
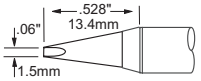
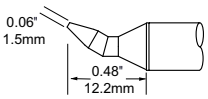
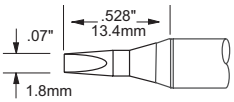
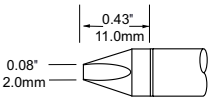
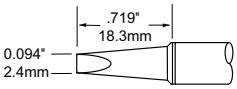
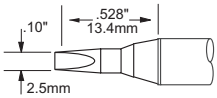
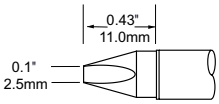
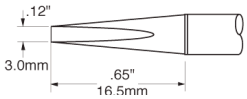
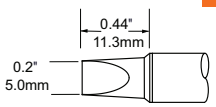
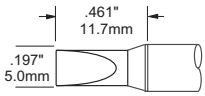
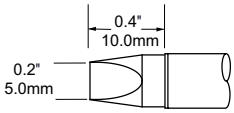
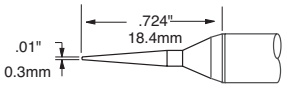
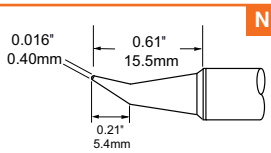
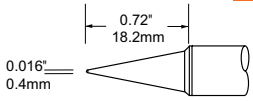
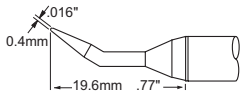
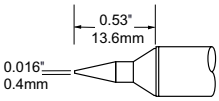
| CHISEL | NEW   | SFV-CH10A<br>STV-CH10A<br>SCV-CH10A |
| |   | SFV-CH10AR<br>STV-CH10AR<br>SCV-CH10AR |
| |   | SFV-CH10<br>STV-CH10<br>SCV-CH10 |
| | NEW   | SFV-CH15A<br>STV-CH15A<br>SCV-CH15A |
| |   | SFV-CH15AR<br>STV-CH15AR<br>SCV-CH15AR |
| |   | SFV-CHB15<br>STV-CHB15<br>SCV-CHB15 |
| |   | SFV-CH18AR<br>STV-CH18AR<br>SCV-CH18AR |
| |   | SFV-CH20<br>STV-CH20<br>SCV-CH20 |
| | NEW   | SFV-CH24A<br>STV-CH24A<br>SCV-CH24A |
| |   | SFV-CH25AR<br>STV-CH25AR<br>SCV-CH25AR |
| CHISEL |   | SFV-CH25<br>STV-CH25<br>SCV-CH25 |
| |   | SFV-CH30AR<br>STV-CH30AR<br>SCV-CH30AR |
| | NEW   | SFV-CH50A<br>STV-CH50A<br>SCV-CH50A |
| |   | SFV-CH50AR<br>STV-CH50AR<br>SCV-CH50AR |
| |   | SFV-CH50<br>STV-CH50<br>SCV-CH50 |
| CONICAL |   | SFV-CNL03AR<br>STV-CNL03AR<br>SCV-CNL03AR |
| | NEW   | SFV-CNB04A<br>STV-CNB04A<br>SCV-CNB04A |
| | NEW   | SFV-CN05A<br>STV-CN05A<br>SCV-CN05A |
| |   | SFV-CNB04AR<br>STV-CNB04AR<br>SCV-CNB04AR |
| |   | SFV-CNL04<br>STV-CNL04<br>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

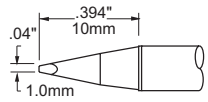
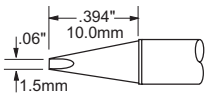
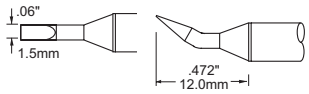
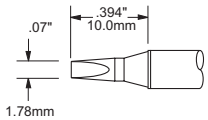
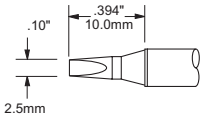
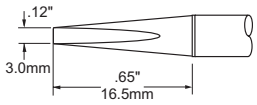
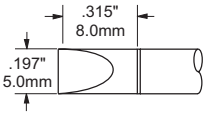
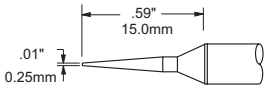
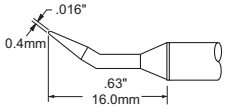
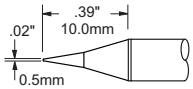
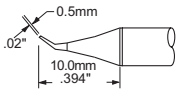
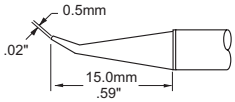
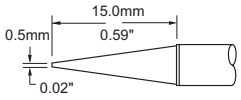
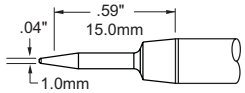
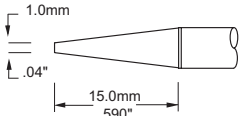
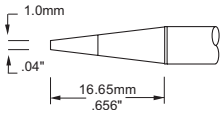
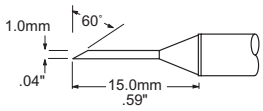
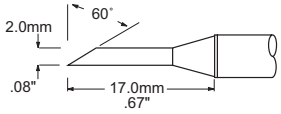
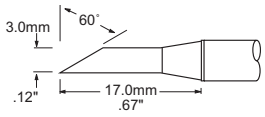
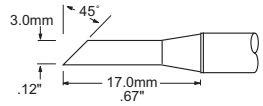
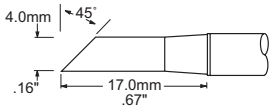
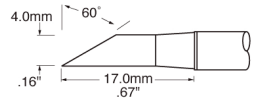
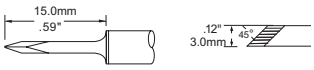
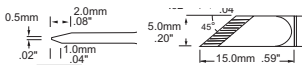
| | SxV Soldering Tips | |
|---|---|---|
| CONICAL | .53" 13.7mm; .02"; 0.5mm | SFV-CN05AR<br>STV-CN05AR<br>SCV-CN05AR |
| | 0.34" 8.5mm; 0.02" 0.5mm | SFV-CN05<br>STV-CN05<br>SCV-CN05 |
| | 0.51" 13.0mm; 0.02" 0.5mm | SFV-CNB05<br>STV-CNB05<br>SCV-CNB05 |
| | NEW; 0.71" 18.0mm; 0.04" 1.0mm | SFV-CNL10A<br>STV-CNL10A<br>SCV-CNL10A |
| | .59" 15.0mm; .04"; 1.0mm | SFV-CNL10AR<br>STV-CNL10AR<br>SCV-CNL10AR |
| | 0.51" 13.0mm; 0.04" 1.0mm | SFV-CNL10<br>STV-CNL10<br>SCV-CNL10 |
| | 0.59" 15.0mm; 0.056" 1.4mm | SFV-CNL14<br>STV-CNL14<br>SCV-CNL14 |
| | 0.55" 14.0mm; 0.8" 2.0mm | SFV-DRH20<br>STV-DRH20<br>SCV-DRH20 |
| | 0.59" 15.0mm; 0.08" 2.0mm | SFV-CNL20<br>STV-CNL20<br>SCV-CNL20 |
| | .08" 2.03mm; 0.58" 14.6mm; 0.54" 13.8mm | SFV-WV20<br>STV-WV20<br>SCV-WV20 |
| KNIFE | 2.4mm 0.095"; 1mm 0.039"; 0.20" 5.0mm; 45°; 2mm 0.079" | SFV-DRK45A<br>STV-DRK45A<br>SCV-DRK45A |
| | 2.4mm .095"; 5.0mm .20"; 45°; 14mm .55" | SFV-DRK50<br>STV-DRK50<br>SCV-DRK50 |

| | | |
|---|---|---|
| HOOF | 2.0mm; 45°; .08"; 20.7mm .81" | SFV-DRH420AR<br>STV-DRH420AR<br>SCV-DRH420AR |
| | 0.10" 2.5mm; 45°; 0.51" 13.0mm | SFV-DRH20CP<br>STV-DRH20CP<br>SCV-DRH20CP |
| | 3.0mm; 45°; .12"; 20.4mm; 0.8" | SFV-DRH430AR<br>STV-DRH430AR<br>SCV-DRH430AR |
| | | SFV-DRH630AR<br>STV-DRH630AR<br>SCV-DRH630AR |
| | NEW; 0.137" 3.47mm; 0.48" 12.2mm; 0.079" 2mm | SFV-DRH420A<br>STV-DRH420A<br>SCV-DRH420A |
| | 0.14" 3.6mm; 45°; 0.51" 13.0mm | SFV-DRH30CP<br>STV-DRH30CP<br>SCV-DRH30CP |
| | | SFV-DRH440R<br>STV-DRH440R<br>SCV-DRH440R |
| | | SFV-DRH640AR<br>STV-DRH640AR<br>SCV-DRH640AR |
| | 0.18" 4.6mm; 45°; 0.51" 13.0mm | SFV-DRH40CP<br>STV-DRH40CP<br>SCV-DRH40CP |
| | NEW; 0.187" 4.75mm; 0.52" 13.2mm; 0.157" 4mm | SFV-DRH440A<br>STV-DRH440A<br>SCV-DRH440A |
| | .74" 18.7mm; .12" 3.0mm; 45° | SFV-DRK30AR<br>STV-DRK30AR<br>SCV-DRK30AR |
| | 18.7mm .74"; 1.8mm .07"; 4.5mm .18"; 45° | SFV-DRK45AR<br>STV-DRK45AR<br>SCV-DRK45AR |

| CxV Blade Tips | | | A |
|---|---|---|---|
| NEW; 0.02" 0.5mm; 0.36" 9.1mm; A | 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

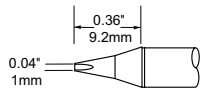
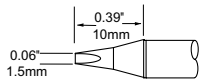
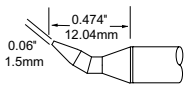
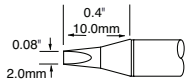
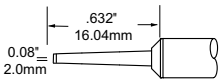
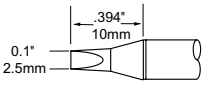
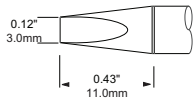
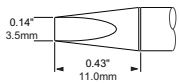
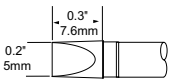
| | PHT Soldering Tips | Compatible with: PS-800, PS-800E and PS-900 Systems and PS-CA1 Coil Assembly |
|---|---|---|
| CHISEL |  | PHT-750315<br>PHT-650315 |
| CHISEL |  | PHT-750325<br>PHT-650325 |
| CHISEL |  | PHT-750326<br>PHT-650326 |
| CHISEL |  | PHT-750335<br>PHT-650335 |
| CHISEL |  | PHT-751355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

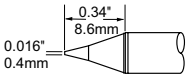
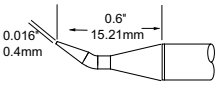
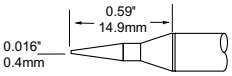
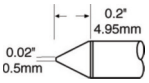
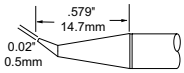
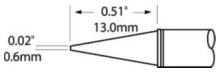
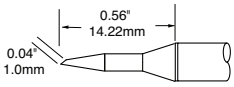
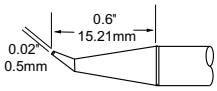
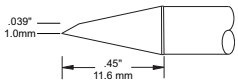
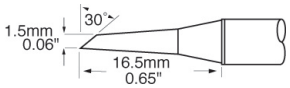
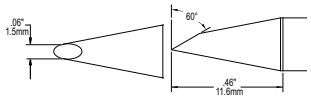
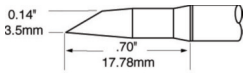
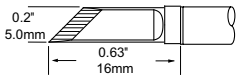
**75 = 750 Series for most standard applications - 65 = 650 Series for temperature sensitive applications**

# 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<br>STP-CH10<br>SCP-CH10 |
| |  | SFP-CH15<br>STP-CH15<br>SCP-CH15 |
| |  | SFP-CHB15<br>STP-CHB15<br>SCP-CHB15 |
| |  | SFP-CH20<br>STP-CH20<br>SCP-CH20 |
| |  | SFP-CHL20<br>STP-CHL20<br>SCP-CHL20 |
| |  | SFP-CH25<br>STP-CH25<br>SCP-CH25 |
| |  | SFP-CH30<br>STP-CH30<br>SCP-CH30 |
| |  | SFP-CH35<br>STP-CH35<br>SCP-CH35 |
| |  | SFP-CH50<br>STP-CH50<br>SCP-CH50 |

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

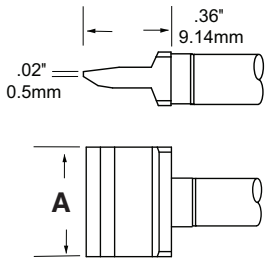
**F** = FR4 / Fiber Glass, for most standard applications **T** = Temperature Sensitive **C** = Ceramic for high thermal demand applications.

# RxP Rework Cartridges

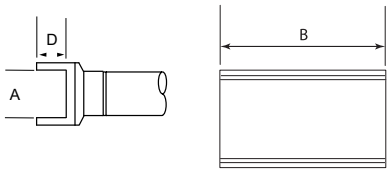
## RxP Rework Cartridges

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)

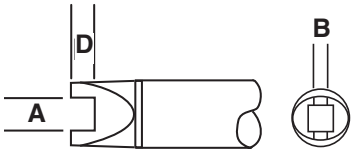
BLADE




TUNNEL

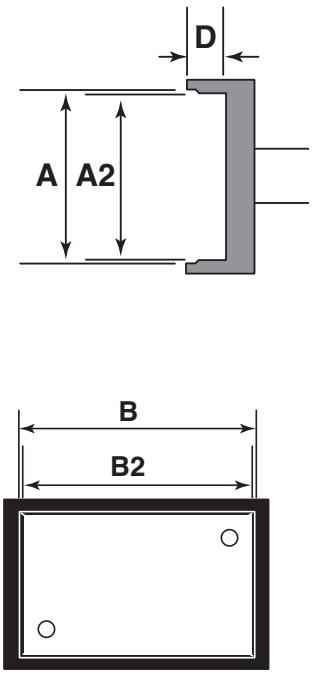



SLOT




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

QUAD



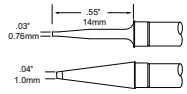
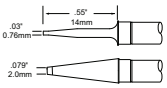
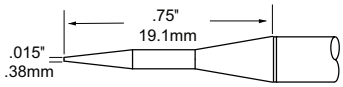
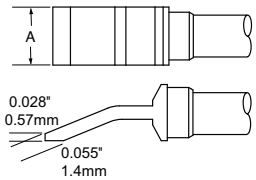

| | A | A2 | D | B | B2 | SMT TYPE |
|---|---|---|---|---|---|---|
| RFP-QD4<br>RCP-QD4 | 12.70<br>(.500) | 11.43<br>(.450) | 3.81<br>(.150) | 15.24<br>(.600) | 13.97<br>(.550) | PLCC 32 |
| RFP-QD6<br>RCP-QD6 | 17.78<br>(.700) | 16.76<br>(.660) | 3.81<br>(.150) | 17.78<br>(.700) | 16.76<br>(.660) | PLCC 44 |
| RFP-QD7<br>RCP-QD7 | 25.27<br>(.995) | 24.38<br>(.960) | 5.59<br>(.220) | 25.27<br>(.995) | 24.38<br>(.960) | PLCC 68 |
| RFP-QD10<br>RCP-QD10 | 20.32<br>(.800) | 19.30<br>(.760) | 3.81<br>(.150) | 20.32<br>(.800) | 19.30<br>(.760) | PLCC 52 |
| RFP-QD15<br>RCP-QD15 | 13.34<br>(.525) | 12.32<br>(.485) | 2.79<br>(.110) | 13.34<br>(.525) | 12.32<br>(.485) | TQFP 80 |
| RFP-QD19<br>RCP-QD19 | 16.13<br>(.635) | 16.13<br>(.635) | 3.30<br>(.130) | 16.13<br>(.635) | 16.13<br>(.635) | QFP 44 |
| RFP-QD20<br>RCP-QD20 | 16.51<br>(.650) | 16.51<br>(.650) | 3.30<br>(.130) | 22.48<br>(.885) | 22.48<br>(.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<br>TTP-BLP1<br>TCP-BLP1 | 1.0mm x 14mm (.04" x .55") |
| BLADE |  | TFP-BLP2<br>TTP-BLP2<br>TCP-BLP2 | 2.0mm x 14mm (.08" x .55") |
| |  | TFP-CNP1<br>TTP-CNP1<br>TCP-CNP1 | Conical<br>0.4mm x 19.1mm (.015" x .75") |
| HEAVY DUTY |  | | **A** |
| | | TFP-BLH40<br>TTP-BLH40<br>TCP-BLH40 | 6.35mm<br>(.25") |
| | | TFP-BLH50<br>TTP-BLH50<br>TCP-BLH50 | 16mm<br>(.62") |
| | | TFP-BLH60<br>TTP-BLH60<br>TCP-BLH60 | 20.5mm<br>(.81") |
| | | TFP-BLH70<br>TTP-BLH70<br>TCP-BLH70 | 28mm<br>(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<br>DCP-CN2 | 0.64<br>(.025) | 1.78<br>(.070) | Standard |
| DFP-CN3<br>DCP-CN3 | 0.76<br>(.030) | 2.03<br>(.080) | Standard |
| DFP-CN4<br>DCP-CN4 | 1.02<br>(.040) | 2.28<br>(.090) | Standard |
| DFP-CN5<br>DCP-CN5 | 1.27<br>(.050) | 2.64<br>(.104) | Standard |
| DFP-CN6<br>DCP-CN6 | 1.52<br>(.060) | 2.84<br>(.112) | Standard |
| DFP-CN7<br>DCP-CN7 | 2.41<br>(.095) | 3.63<br>(.143) | Standard |
| DFP-CNL3<br>DCP-CNL3 | 0.76<br>(.030) | 2.03<br>(.080) | Long Reach |
| DFP-CNL4<br>DCP-CNL4 | 1.02<br>(.040) | 2.28<br>(.090) | Long Reach |
| DFP-CNL5<br>DCP-CNL5 | 1.27<br>(.050) | 2.64<br>(.104) | Long Reach |

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# 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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**Данный компонент на территории Российской Федерации**

**Вы можете приобрести в компании MosChip.**

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http://moschip.ru/get-element

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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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