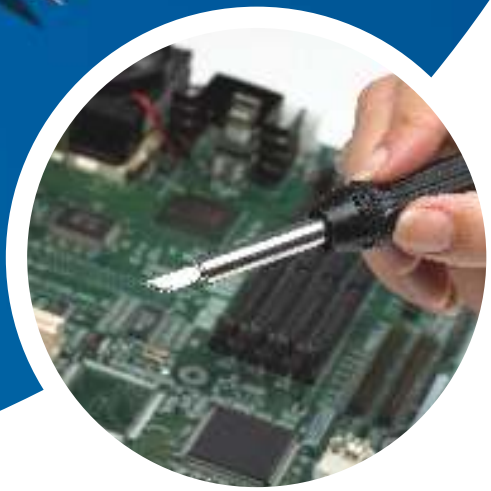


Soldering, Desoldering and Rework

OK INTERNATIONAL™

Tools for Technology

OK International has been a leading manufacturer of tools for the electronics assembly work bench for almost 60 years. As the industry has been rapidly changing, our soldering, desoldering and rework systems have evolved from the old Metcal brand to keep up with lead-free processes and the demand for fast, yet high performance. Our new line of soldering, desoldering and rework systems features the OK International brand logo.

These new systems are high-performance, yet competitively priced. Our Multi-function Rework Systems (MFR) are versatile tools that not only expertly perform rework, they also have tools for SMT and through-hole soldering. The PS-800 Soldering System is the perfect compact system for repetitive manual soldering and touch-up. And, the new HCT-900 Hand Held Convection Tool is ideal for removing components from 0201 up to 304 pin QFP, as well as reworking through-hole devices such as sockets and connectors.

Our new soldering, desoldering and rework systems are part of our family of complimentary products that also includes advance package rework, benchtop fume extraction and fluid dispensing systems. Our systems are all developed to incorporate innovative designs, professional performance and ease of use.

Known. Trusted. Quality. That's OK International. With decades of experience we are committed more than ever to provide customer driven solutions and the reliable products you demand.

Table of Contents

SmartHeat® Technology

Savvy electronic production engineers define success by how they maximize their productivity, yield, and product reliability. All of these factors depend directly upon process control. To achieve success, OK International has developed SmartHeat® conduction soldering systems which uniquely sense the exact thermal requirement for each solder joint and respond by delivering the precise amount of thermal energy at the rate required to create a reliable connection. The result is a high degree of control without resorting to higher tip idle temperatures required by conventional ceramic heater technologies. Consequently the risk of component / board damage is minimized, especially important with the greater thermal demands required by lead-free applications.

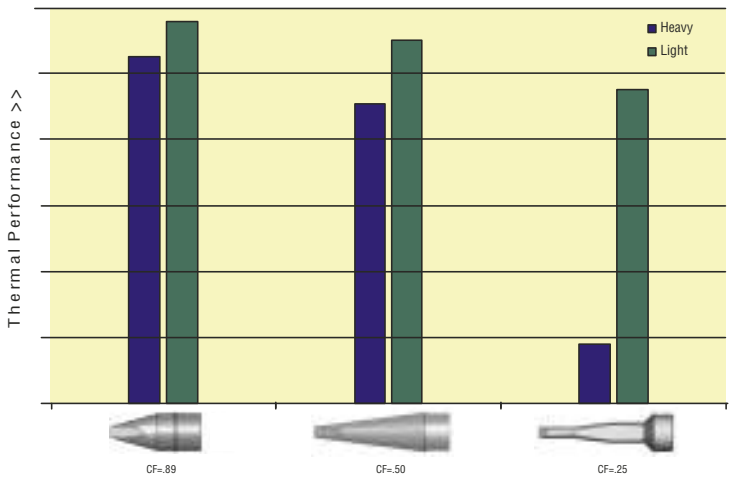
As you'll see below, SmartHeat® provides unique benefits in the delivery of high reliability low risk conduction soldering solutions, especially with lead-free alloys. All of these add up to provide a highly consistent level of process control.

SmartHeat® Delivers Direct Power

First and foremost, the success of conduction soldering depends upon the availability and controlled flow of thermal energy into the connection during the two critical phases flux activation and intermetallic bond formation. Lead-free alloys, with higher thermal demands, further heighten these requirements. Conventional ceramic heaters attempt to control this process by managing indirect parameters, such as the tip idle temperature. In contrast, SmartHeat® technology senses the specific thermal demand directly at the solder pad and delivers the precise quantity and flow of thermal energy during both phases to ensure a reliable connection.

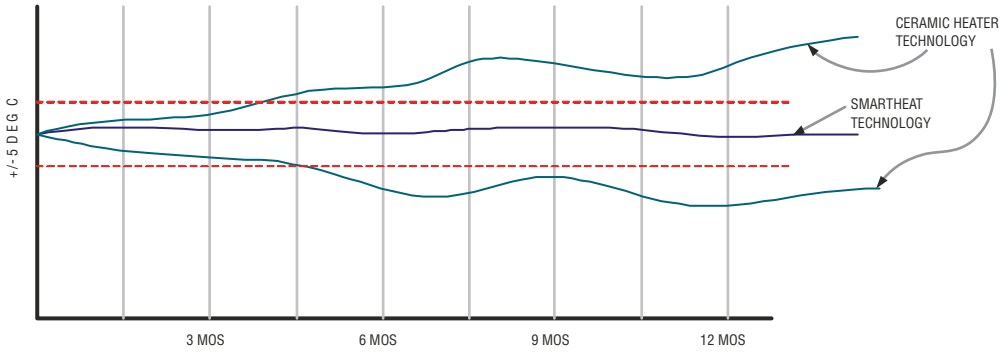
Precision Tip Selection – The Conductivity Factor

During the execution of a successful soldering connection, the tip is the thermal energy “highway” from the heater to the pad and, therefore, the choice of tip geometry is critical to prevent power losses. In addition to providing the most thermally efficient tip designs, OK International has pioneered the tip “Conductivity Factor” rating system providing operators with quantifiable guidance in the selection of the optimum tip geometry. Additionally, our proprietary Power Meter can quantify exact pad energy requirements, further refining the tip selection process. Lead-free alloys, with tighter thermal demands, make these tools mandatory.



Temperature Stability – No Need for Calibration

Nearly all industry standards associated with conduction soldering performance cite temperature stability as a key requirement. To meet the demands of temperature stability, conventional ceramic heater systems depend on the sensor, heater and operator set point controls. Each of these elements is subject to drift and instability requiring frequent calibration and certification to ensure compliance. By contrast, the repeatability of SmartHeat® technology is inherently determined by the molecular properties of the heater material and does not shift over time, ensuring long term stability without the need for calibration.

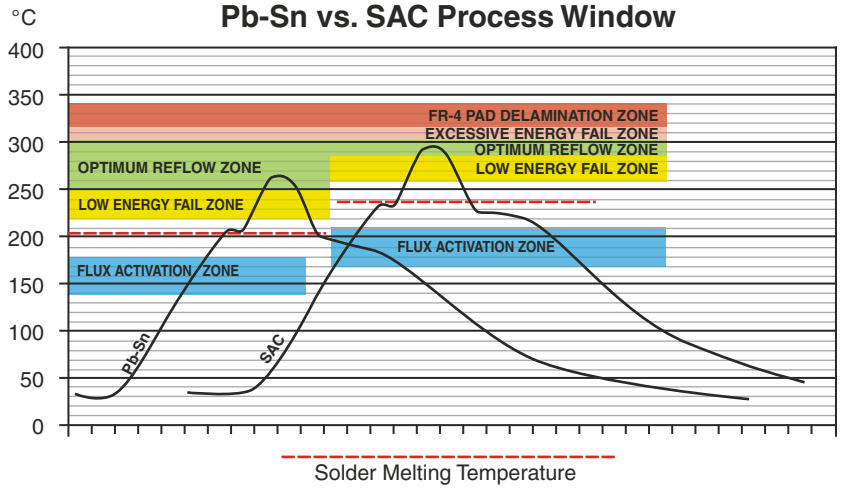


Reduced Risk of Overshoot

Conventional soldering stations strive to control the process with tip temperature using thermocouple sensors and ceramic heaters. Inherent with this technology will be significant temperature variances throughout the tip body and consequently thermal overshoot/undershoot. The risk is unreliable solder connections or damaged components. SmartHeat® technology, on the other hand, detects and controls the energy requirement of the pad, avoiding thermal delivery variances thereby eliminating the risk of component damage.

Perfect for Lead-Free

The steps required for reliable lead-free connections parallel those for traditional alloys except that the thermal demands are greater. The typical operator response to the higher thermal demand is to increase tip idle temperature, unfortunately at higher temperatures the contribution to thermal performance is negligible. More importantly, the increase in tip idle temperature comes dangerously close to component and substrate damage levels making process control critical. Compared to conventional technology, SmartHeat®, combined with our Precision Tip Selection tools delivers precise process control assuring consistently reliable connections at low operating temperatures which provide the thermal performance necessary for lead-free.



Increase Tip Life and Value

The useful life of a tip is dependent upon many factors including flux corrosion, oxidation and tin dissolution. With higher tip idle temperatures, the contribution from these factors is dramatically increased. The resultant de-wetting from these chemical surface interactions causes many operators to increase tip force, which significantly accelerates tip life deterioration. With the advantages of SmartHeat® technology operators can solder at lower temperatures and, combined with proper tip selection and care, dramatically extend tip life and value.

MFR Multi Function Rework Systems

The All in One Solution

Imagine performing all of your production soldering, rework and desoldering tasks with just one tool. The new Multi Function Rework Systems (MFR) not only expertly perform rework, they also have tools for SMT and through-hole soldering. These flexible systems feature two switchable outputs with a comprehensive choice of tools that support today's complex PCB and component technologies.

Systems are configured with the following tools:

- Soldering and Rework
- Standard Tweezer
- Production Soldering
- Precision Tweezer
- Adjustable Desoldering Hand-Piece

Perfect for Lead-Free

The MFR Series uses SmartHeat® Technology to deliver the power required for lead-free connections. SmartHeat® Technology's variable power instantaneously senses and continuously delivers the precise thermal energy to the pad, yielding high quality solder joints while protecting sensitive components from damage.

Tip and Cartridge Options

With the MFR Series you can use heater tips or tip cartridges, each filling a specific need. Heater tips are cost effective to meet the demands of point to point, production soldering. While tip cartridges are suited for high performance and rework applications. Both options incorporate the popular quick change design OK tips are well known for, which eliminates the maintenance associated with traditional irons. The OK cartridge tip has the slimmest diameter allowing access to the tightest applications and its single piece design provides a secure ground connection protecting sensitive components.

Versatility, Performance and Value

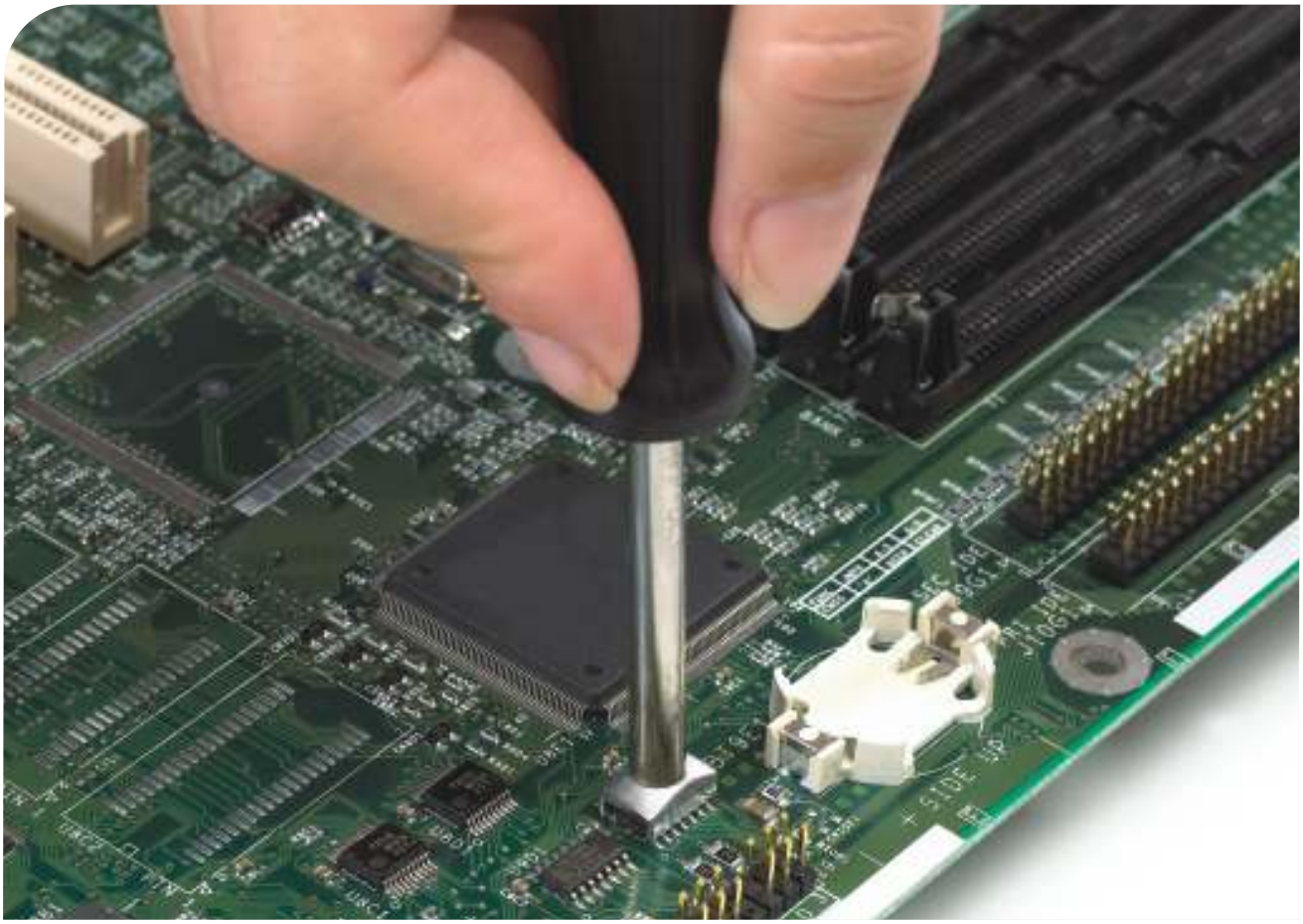
These high performance systems can be adapted to your exact needs, whether it is cost effective production soldering, more complicated rework with cartridges, handling small components with the unique Precision Tweezer hand-piece or performing through-hole desoldering.

All units include "Auto Standby" and "Auto Off" functions which can be programmed to activate on different timing to help save tip life, especially when working on a lead-free process. Proprietary built-in motion detection then brings the unit back to life when the operator lifts the hand-piece from the cradle. In addition, a specially designed lead-free workstand provides efficient tip cleaning and maintenance options.

And, when multiple units are used on the same bench or for the same process, smart mechanical design allows for the units to be interlocked, maximizing bench space.

Comfort and Simplicity

The short tip-to-grip distance of the MFR hand-piece improves process precision for fine pitch applications. The cartridge system provides the slimmest shaft for maximum access whilst the precision tweezer design enables rework of the smallest chips and resistors, such as 0201 chips. Ergonomic design delivers superior performance with operator comfort and control.

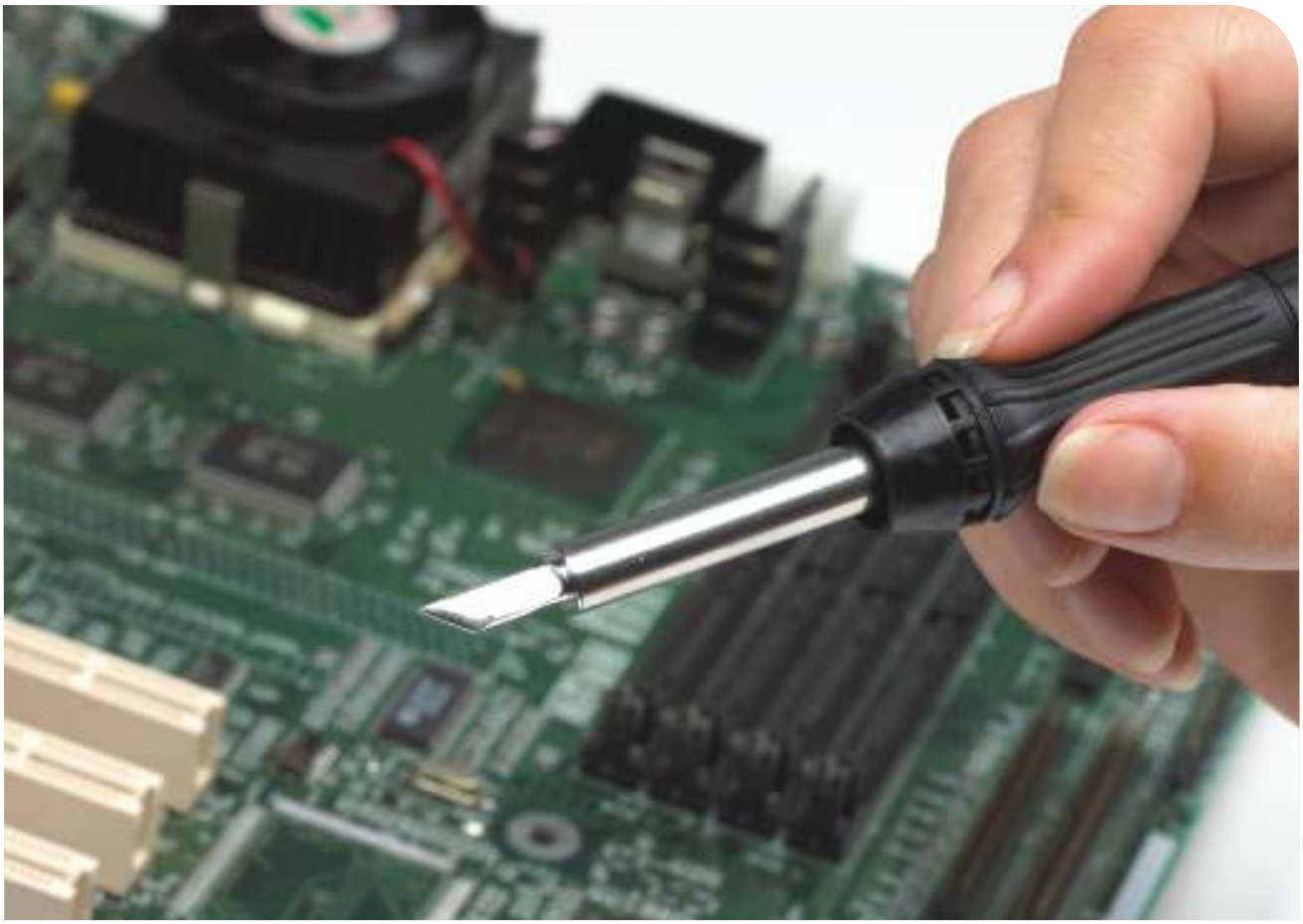


Soldering and Rework System

Cartridge heater technology provides soldering and rework performance to suit even the most demanding SMT removal and placement applications. The cartridges provide fast thermal performance and respond quickly to the load demands. A small shaft diameter provides access to tightly cramped rework areas and enables the most difficult operations to be performed effortlessly.

MFR-SRC Soldering & Rework System

Part No.	Description
MFR-SRC	Soldering and Rework System
Includes	
MFR-PS1K	Two Port Universal Voltage Power Supply
MFR-HSR	Soldering and Rework Hand-piece
MFR-WSSR	Soldering Workstand



Production Soldering System

The Production Solder Tip System is designed for production soldering applications where superior SmartHeat® Technology is needed to provide the performance for lead-free, but with a lower cost of ownership due to the innovative tip design. The two-piece, long life heater and cost effective tip design provide a viable production alternative for regular and lead-free soldering.

MFR-PST Production Soldering System

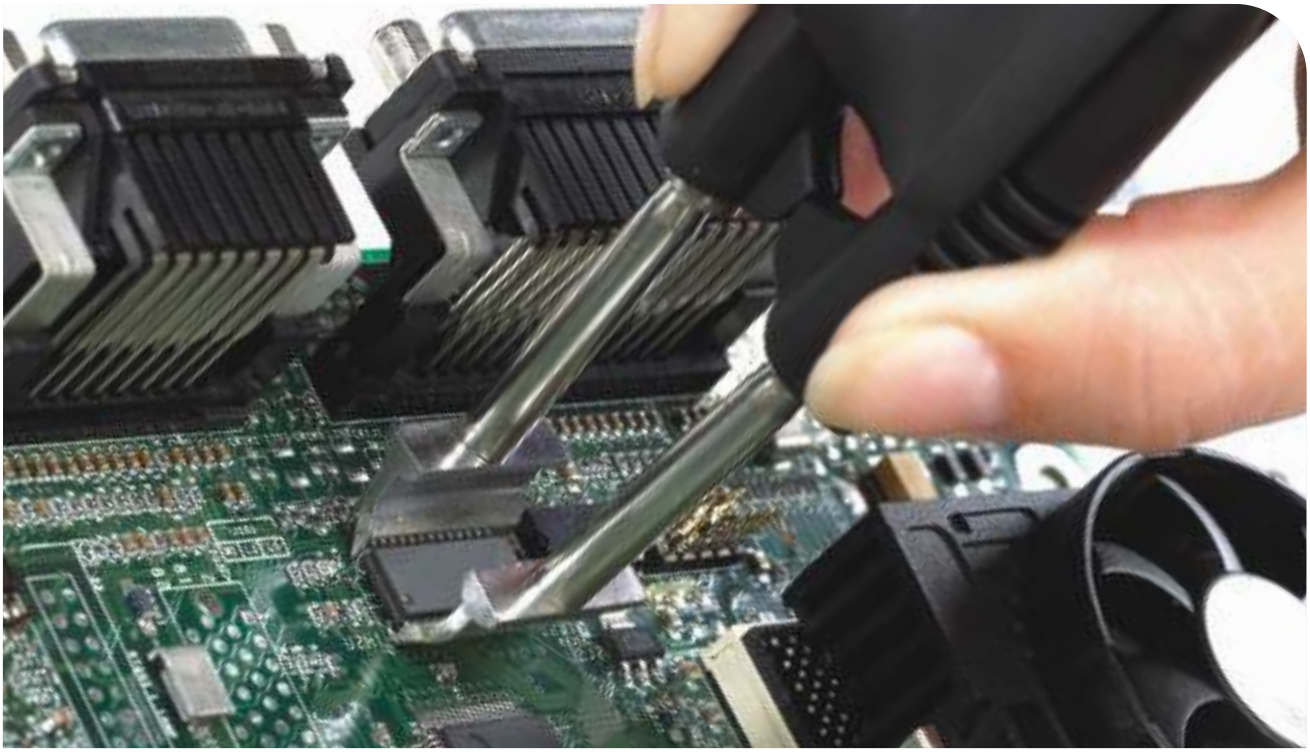
Part No.	Description
MFR-PST	Production Soldering System
Includes	
MFR-PS1K	Two Port Universal Voltage Power Supply
MFR-HPS	Production Soldering Hand-piece and Coil Assembly
MFR-WSSR	Soldering Workstand

Precision Tweezer, Soldering and Rework System

The Precision Tweezer has been ergonomically designed to be lightweight and easy to use for removing even the smallest of discrete components, such as 0201 packages. The Precision Tweezer has a double sided pivot for “true tweezer” action and a dual position pitch adjustment to help the operator target the component to skillfully complete the application.

MFR-PTZ Precision Tweezer, Soldering & Rework System

Part No.	Description
MFR-PTZ	Precision Tweezer, Soldering and Rework System
Includes	
MFR-PS1K	Two Port Universal Voltage Power Supply
MFR-HPT	Precision Tweezer Hand-piece
MFR-WSPT	Tweezer Workstand
MFR-HSR	Cartridge Solder / Rework Hand-piece
MFR-WSSR	Soldering Workstand



Tweezer, Soldering and Rework System

This combination system offers flexibility with the rework versatility of the Solder/Rework Cartridge Hand-piece with a standard tweezer system for discrete and SO symmetrical components

Part No.	Description
MFR-STZ	Tweezer, Soldering and Rework System
Includes	
MFR-PS1K	Two Port Universal Voltage Power Supply
MFR-HSR	Soldering & Rework Hand-piece
MFR-WSSR	Soldering Workstand
MFR-HST	Standard Tweezer Hand-piece
MFR-WSPT	Tweezer Workstand

Upgrade Kits

Add versatility to your MFR System. Hand-piece Upgrade Kits can be ordered to compliment any of the MFR Systems. Kits include both the hand-piece and workstand.

Part No.	Description
MFR-STZ-AD	Standard Tweezer Upgrade Kit, hand-piece and workstand
MFR-SRC-AD	Solder / Rework Cartridge Upgrade Kit, hand-piece and workstand
MFR-PTZ-AD	Precision Tweezer Upgrade Kit, hand-piece and workstand
MFR-PST-AD	Production / Solder Tip Upgrade Kit, hand-piece and workstand

Note: Tips and cartridges are not included and need to be ordered separately.

Versatile Pencil and Pistol Grip Combination Hand-piece System

The MFR Desoldering Systems provides superior thermal transfer to the joint, effectively reflowing the solder and then quickly and efficiently removing all solder. SmartHeat® Technology makes through-hole desoldering easy and safe from board damage. The state-of-the-art hand-piece can be adjusted from a pencil to a gun with a simple press of a button. Operators can find the most comfortable and efficient position to tackle the rework challenge. The paper solder collection chamber and filter system is quick and easy to change, and provides low cost maintenance.

Two MFR Desoldering Systems are available. The MFR-DSX system requires shop air for desoldering. If shop air is not available, the MFR-DSI features an internal vacuum pump.

Part No.	Description
MFR-DSX	Desolder System, External Air
MFR-DSI	Desolder System, Internal Air Pump
System Includes	
MFR-PS2X	Two Port Universal Voltage Power Supply, External Air (MFR-DSX only)
MFR-PS2K	Two Port Universal Voltage Power Supply, with Internal Air Pump (MFR-DSI only)
MFR-HDS	Desolder Hand-piece
MFR-WSDS	Desolder Workstand

Complete MFR System for Soldering, Desoldering and Rework

The MFR Solder / Desoldering Systems include both the innovative desoldering hand-piece and the solder/rework cartridge hand-piece to cover all your rework needs.

Two MFR Soldering / Desoldering Systems are available. The MFR-SDX system requires shop air for desoldering. If shop air is not available, the MFR-SDI features an internal pump that provides suction.

Part No.	Description
MFR-SDX	Solder / Desolder System, External Air
MFR-SDI	Solder / Desolder System, Internal Air Pump
Systems Include	
MFR-PS2X	Two Port Universal Voltage Power Supply External Air (MFR-SDX only)
MFR-PS2K	Two Port Universal Voltage Power Supply with Internal Air Pump (MFR-DSI only)
MFR-HSR	Soldering and Rework Hand-piece
MFR-WSSR	Soldering Workstand
MFR-HDS	Desoldering Hand-piece
MFR-WSDS	Desoldering Workstand

Note: Tips and cartridges are not included and need to be ordered separately.

Soldering Tip Heater Options

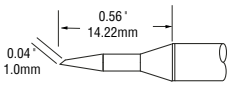
With hand soldering, the task is to make a quality solder connection, without damaging the substrate and without negatively impacting throughput. All of the standard MFR Series power tips & rework cartridges are designed for use with glass fiber (FR4) PCB substrates. This is denoted by the second letter in the part number: “F”. For example: SFP-CH10, DFP-CN3, and SFV-CNL10.

However, some specialist applications require working with thermally demanding or temperature sensitive substrates, such as ceramic hybrids or flexible circuits. OK International has developed specialty heaters that quickly deliver the necessary power, but operate at temperatures that minimize the risk of substrate damage. These are denoted by replacing the "F" in the part number with a "T" for temperature sensitive or a "C" for demanding loads. Please contact your local representative for information and availability of specialty tip heaters. For example: STP-CH10 and DCP-CN3.

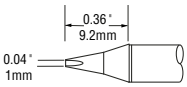
F = Standard FR4 Substrate
T = Temperature Sensitive
C = Ceramic or Heavy Load

Standard Soldering Tip Cartridges

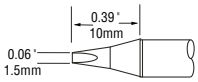
The Standard Soldering Tip Cartridges are used with the MFR-HSR Soldering & Rework Hand-piece and have been designed to deliver outstanding performance for the majority of point-to-point soldering and basic rework applications. The geometries within the range have been optimized to deliver maximum accessibility combined with optimal thermal efficiency within a narrow cartridge diameter



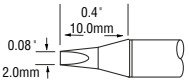
SFP-BVL10
Bevel Cartridge,
60° 1.0mm (.04")



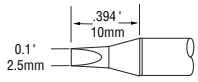
SFP-CH10
Chisel Cartridge,
30° 1.0mm (.04")



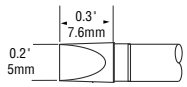
SFP-CH15
Chisel Cartridge,
30° 1.5mm (.06")



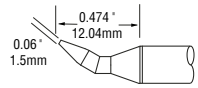
SFP-CH20
Chisel Cartridge,
30° 2.0mm (.08")



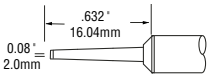
SFP-CH25
Chisel Cartridge,
30° 2.5mm (.10")



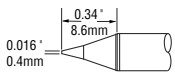
SFP-CH50
Chisel Cartridge,
30° 5.0mm (.20")



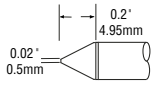
SFP-CHB15
Chisel Cartridge,
30° Bent 1.5mm (.06")



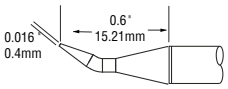
SFP-CHL20
Chisel Cartridge,
60° Long Reach 2.0mm (.08")



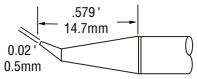
SFP-CN04
Conical Cartridge,
0.4mm (.016")



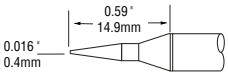
SFP-CN05
Conical Cartridge,
0.5mm (.02")



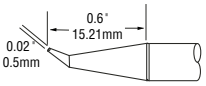
SFP-CNB04
Conical Cartridge Bent,
0.4mm (.016")



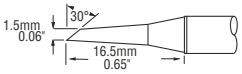
SFP-CNB05
Conical Cartridge Bent,
0.5mm (.02")



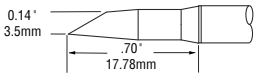
SFP-CNL04
Conical Cartridge Long Reach,
0.4mm (.016")



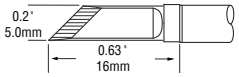
SFP-DRH05
Drag Soldering Cartridge, Hoof
0.5mm (.02")



SFP-DRH15
Drag Soldering Cartridge, Hoof
1.5mm (.06")



SFP-DRH35
Drag Soldering Cartridge, Hoof
3.5mm (.14")



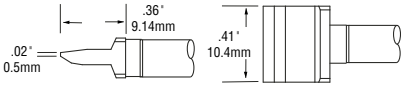
SFP-DRK50
Drag Soldering Cartridge, Knife
5.0mm (.20")

To order specialty versions of the Soldering Tip Cartridges replace the "**F**" in the part number with the appropriate letter designate for your application when ordering: **T** = Temperature Sensitive, **C** = Ceramic or Heavy Load

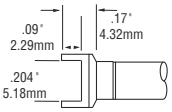
Dimensions and artwork listed are for indication/guidance only. Numbers have been rounded up.
Please contact your local technical support if you require specific technical information.

Rework Cartridges

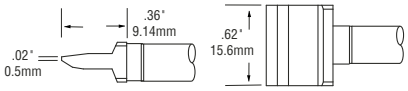
The Rework Cartridges are used with the MFR-HSR Soldering & Rework Hand-piece for conduction rework of surface mount components. The geometries are compatible with common SMT Chip and SOIC components.



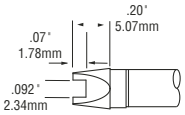
RFP-BL1
Blade Cartridge,
10mm (0.4")



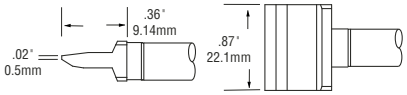
RFP-DL2
Tunnel Cartridge,
SOIC 8 Chip Package



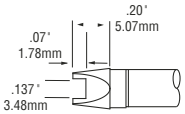
RFP-BL2
Blade Cartridge,
16mm (0.63")



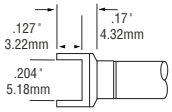
RFP-SL1
Slot Cartridge,
0805 Chip Package



RFP-BL3
Blade Cartridge,
22mm (0.87")



RFP-SL2
Slot Cartridge,
1206 Chip Package

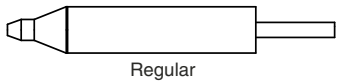


RFP-DL1
Tunnel Cartridge,
SOIC 14-16 Chip Package

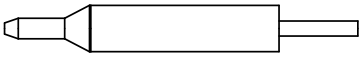
To order specialty versions of the Rework Cartridges replace the "**F**" in the part number with the appropriate letter designate for your application when ordering: **C** = Ceramic or Heavy Load

Desoldering Tips

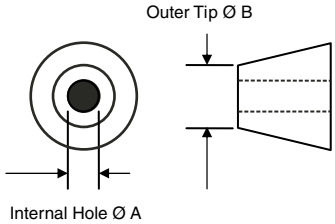
The Desoldering Tips are used with the MFR-HDS Desoldering Hand-piece, primarily for solder removal on through-hole components. The tips are supplied in a range of diameters as well as in a long reach configuration to allow improved access on tightly packed PCBs.



Regular



Long Reach



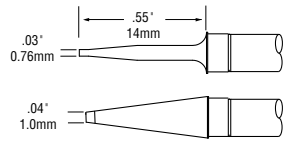
Part Number	Description	Ø A mm (in)	Ø B mm (in)
DFP-CN2	Desolder Tip	0.67mm (.026")	1.80mm (.070")
DFP-CN3	Desolder Tip	0.79mm (.031")	2.05mm (.080")
DFP-CN4	Desolder Tip	1.05mm (.041")	2.30mm (.090")
DFP-CN5	Desolder Tip	1.31mm (.052")	2.65mm (.104")
DFP-CN6	Desolder Tip	1.55mm (.061")	2.85mm (.112")
DFP-CN7	Desolder Tip	2.44mm (.096")	3.65mm (.143")
DFP-CNL3	Desolder Tip Long Reach	0.79mm (.031")	2.05mm (.080")
DFP-CNL4	Desolder Tip Long Reach	1.05mm (.041")	2.30mm (.090")
DFP-CNL5	Desolder Tip Long Reach	1.31mm (.052")	2.65mm (.104")

To order specialty versions of the Desoldering Tips replace the "**F**" in the part number with the appropriate letter designate for your application when ordering: **C** = Ceramic or Heavy Load

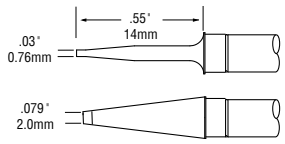
Dimensions and artwork listed are for indication/guidance only. Numbers have been rounded up.
Please contact your local technical support if you require specific technical information.

Precision Tweezer Cartridges

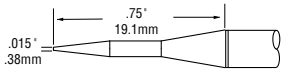
The Precision Tweezer Cartridges are supplied in pairs to be used in the MFR-HPT Precision Tweezer Hand-piece for conduction rework of very fine surface mount chip components.



TFP-BLP1
Tweezer Cartridge,
Blade 1.0mm (0.04") Pair



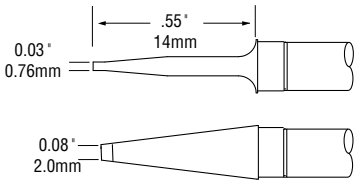
TFP-BLP2
Tweezer Cartridge,
Blade 2.0mm (0.08") Pair



TFP-CNP1
Tweezer Cartridge,
Conical 0.4mm (.015") Pair

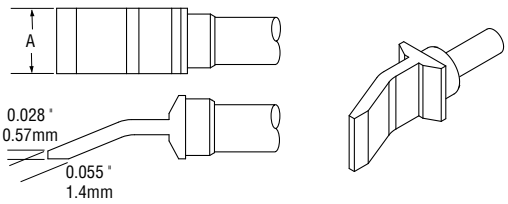
Standard Tweezer Cartridges

The Standard Tweezer Cartridges are supplied in pairs and are designed to work with the MFR-HST Standard Tweezer Hand-piece for conduction removal of two sided surface mount components. The geometries are specifically designed for larger SMT Chip and Dual in-line SOIC components. All tweezer cartridges are sold in pairs.



Fine Point Tip

TFP-BLH3 Tweezer Heavy Duty Cartridge, 2.0mm (0.08") Pair



Blade Tip

TFP-BLH4 Tweezer Heavy Duty Cartridge, A = 6.35mm (.25") Pair

TFP-BLH5 Tweezer Heavy Duty Cartridge, A = 16mm (.62") Pair

TFP-BLH6 Tweezer Heavy Duty Cartridge, A = 20.5mm (.81") Pair

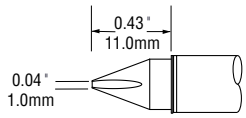
TFP-BLH7 Tweezer Heavy Duty Cartridge, A = 28mm (1.1") Pair

To order specialty versions of the Precision Tweezer Cartridges replace the "**F**" in the part number with the appropriate letter designate for your application when ordering: **T** = Temperature Sensitive **C** = Ceramic or Heavy Load

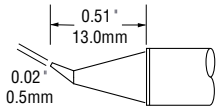
Dimensions and artwork listed are for indication/guidance only. Numbers have been rounded up.
Please contact your local technical support if you require specific technical information.

Power Tips for Production Soldering

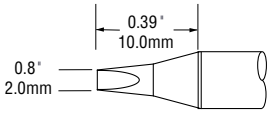
The Power Heater Tips offer a combination of performance and value. The replaceable tips are used on the MFR-HPS Production Soldering Hand piece and deliver high power, economical soldering in high volume production applications. The tips come in a thermally optimized large diameter tip that includes additional iron plating for longer life.



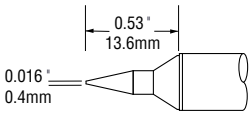
SFV-CH10
Chisel Solder Tip,
30° 1.0mm (.04")



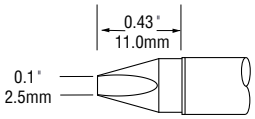
SFV-CNB05
Conical Bent Solder Tip,
0.5mm (.02")



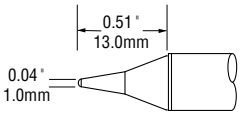
SFV-CH20
Chisel Solder Tip,
2.0mm (.08")



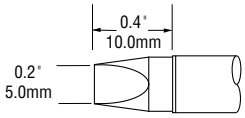
SFV-CNL04
Conical Long Solder Tip,
0.4mm (.016")



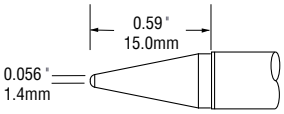
SFV-CH25
Chisel Solder Tip,
2.5mm (.10")



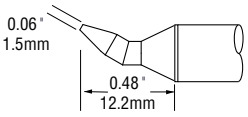
SFV-CNL10
Conical Long Solder Tip,
1.0mm (.04")



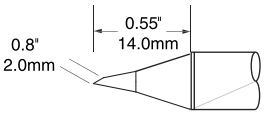
SFV-CH50
Extra Large Chisel Solder Tip,
5.0mm (.20")



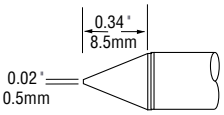
SFV-CNL14
Conical Long Tip,
1.4mm (.056")



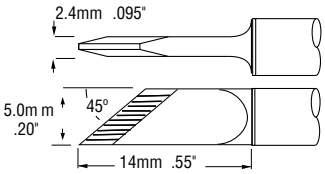
SFV-CHB15
Chisel Bent 30° Solder Tip,
1.5mm (.06")



SFV-DRH20
Conical Bevel Solder Tip,
2.0mm (.08")



SFV-CN05
Conical Solder Tip,
0.5mm (.02")



SFV-DRK50
Knife Solder Tip,
5.0mm (.20")

To order specialty versions of the Power Heater Tips replace the "**F**" in the part number with the appropriate letter designate for your application when ordering: **T** = Temperature Sensitive **C** = Ceramic or Heavy Load

Dimensions and artwork listed are for indication/guidance only. Numbers have been rounded up.
Please contact your local technical support if you require specific technical information.

MFR-PTZ, MFR-SRC, MFR-PST, MFR-STZ

System Specifications	
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
Power Consumption	65 Watts max.
Output Power	50 Watts max. at 22°C ambient temperature
Output Frequency	450 KHz
Power Cord (3-wire)	183cm (72”)
Power Supply Dimensions w x d x h	122mm x 200mm x 152.5mm (4.8” x 8” x 6”)
Agency Tested Per	IEC 61000-6-1,EC 61000-6-3 and UL499, FCC CFR Part 15
Tip-to-Ground Potential	<2mV
Tip-to-Ground Resistance	<2 ohms
Idle Tip Temperature Stability	± 1.1°C in still air
Hand-piece Cable Length	L=71cm (48”), burn proof, ESD safe
Hand-piece Connector	8-pin power connector
Workstand Dimensions w x d x h	100mm x 200mm x 100mm (4” x 8” x 4”)

MFR-DSI, MFR-SDI, MFR-DSX, MFR-SDX

System Specifications	
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
Power Consumption	90 Watts max.
Output Power	50 Watts max. at 22°C ambient temperature
Output Frequency	450 KHz
Power Cord (3-wire)	183cm (72”)
Dimensions w x d x h	170mm x 200mm x 152.5mm (7” x 8” x 6”)
Agency Tested Per	IEC 60335-2-45 and UL499, FCC CFR Part 15
Tip-to-Ground Potential	<2mV
Tip-to-Ground Resistance	<2 ohms
Idle Tip Temperature Stability	± 1.1°C in still air
Hand-piece Cable Length	L=71cm (48”), burn proof, ESD safe
Hand-piece Connector	8-pin power connector
Workstand Dimensions w x d x h	100mm x 200mm x 100mm (4” x 8” x 4”)
Recommended Air Pressure Input	450kPa (65PSI) - shop air versions only
Noise Level	Less than 70dBA
Vacuum Suction Force	22” Hg at vacuum pump (at sea level)

Hand-pieces and Cords

Part No.	Description
MFR-HPT	Precision Tweezer Hand-piece W/Cord
MFR-HSR	Cartridge Solder / Rework Hand-piece W/Cord
MFR-HPS	Heater Tip Hand-piece W/Coil Assembly & Cord
MFR-HDS	Convertible Desolder Hand-piece
MFR-HST	Standard Tweezer Hand-piece W/Cord
MFR-CA1	Coil Assembly for MFR-HPS Hand-piece

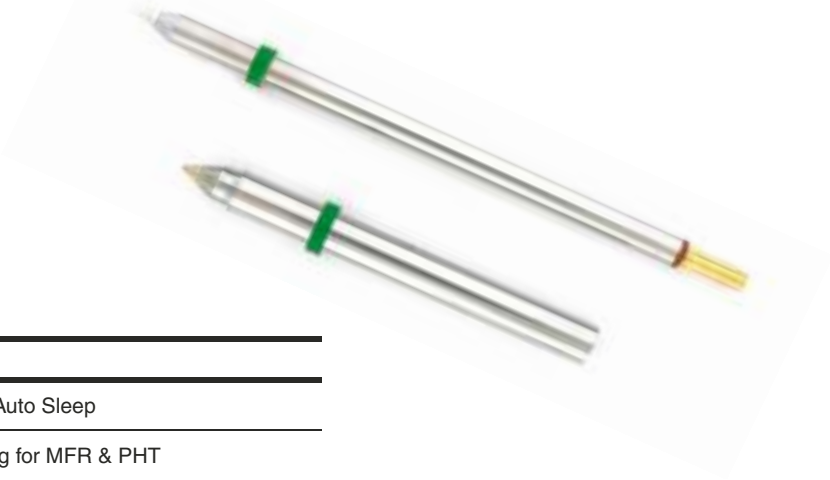
Replacement Workstands & Upgrades

In addition to the regular workstands, Auto Sleep Workstands and Cradles are now available. These new stands help extend tip life by reducing the temperature when the hand-piece is idle in the workstand.

Part No.	Description
MFR-WSPT	Tweezer Workstand
MFR-WSSR	Soldering Workstand
MFR-WSDS	Desolder Workstand
MFR-WSAS	Auto Sleeper Workstand
MFR-WSC1	Solder Rework Cradle Auto Sleep (Black)
AC-Y10	Yellow Sponge (pack of 10)
AC-BP	Brass Pad (pack of 10)

Lead-Free Process Identification

For factories that are transitioning to lead-free, it is important to identify which processes are using lead-free to avoid accidental cross-contamination of solder materials. To easily identify the lead-free processes, we have designed visual indicators that fit on the system parts where cross-contamination can occur, such as tips & workstand sponges.



Part No.	Description
MFR-WSC2	Green Solder Rework Cradle - Auto Sleep
AC-CK1	Green cartridge identification ring for MFR & PHT Consumables (Pack of 50)
AC-CK4	Green cartridge identification ring for SFV Power Tips (Pack of 50)

Miscellaneous Accessories

Part No.	Description
AC-BRUSH-P	Soft Brass Brush
AC-CP2	Cartridge Removal Pad
AC-FX1	Fume Extraction Kit
AC-IK	Inter Locking / Mounting Kit
AC-MFR-PM	Power Meter

MFR Desoldering Accessories & Maintenance Tools

Part No.	Description	Part No.	Description
AC-TC-P	Desoldering Tip Cleaner (Pack of 12)	**AC-PR1**	Pump Re-build Kit
DP-SL3	Front Seal	**AC-PM1**	Pump with Motor Replacement Kit
AC-VL	ESD Air Hose	**AC-CC**	Solder Collection Chamber
AC-DFP	Chamber Liner, Filter & Fume		

PS-800 Soldering System

Compact Production Soldering System

Designed to be the perfect, compact system for repetitive manual soldering and touch-up. The PS-800 Soldering System features an innovative, compact power supply with a small footprint which is ideal for production environments. The system combines the power and superior process control advantages of SmartHeat®, with the system quality and innovative design of OK International irons. In addition, the PS-800 Soldering System utilizing SmartHeat® Technology requires no calibration

Minimal Cost of Ownership

The PS-800 Soldering System uses replaceable heater tips rather than cartridges, with the cost being comparable to that of conventional tips, making cost of ownership competitive. The unique two-piece design separates the induction coil from the heater tip. The long-life induction coil remains in the handle, while replaceable heater tips are easily removed and replaced.

OK International has developed a comprehensive line of soldering tip geometries for the PS-800 Soldering System. Plus, enhancements to SmartHeat® Technology have allowed for an increase to the plating thickness of the tips. The result is extended tip life without reducing thermal performance.

Perfect For Lead-Free Hand Soldering

The most important technical challenge of lead-free hand soldering is being able to solder heat sensitive components at 215-220°C, without causing damage. This requires a soldering iron that can respond to the thermal energy demands of the application and deliver the correct amount of energy to the joint without overshoot that can cause damage.

OK International's PS-800 Soldering System is perfect for lead-free hand soldering. SmartHeat® Technology allows the higher thermal performance requirements of lead-free alloys to be met without increasing the tip temperature. Thus, the risk of thermal damage is eliminated.

Shown with optional PS-WSAS Workstand

The PS-800 Soldering System allows operators to produce high quality product quickly, easily and safely. It is a reliable, hassle-free production tool that can be used to solder lead-free PCBs immediately without needing to be continually re-calibrated to meet the higher temperature requirements like traditional technologies.

PS-800 Soldering System

Part No.	Description
PS-800	PS-800 Soldering System
Includes **PS-PW1**	PS-800 Power Supply
PS-WSK1	PS-800 Workstand with Sponge
PS-HC1	PS-800 Soldering Handle with Coil Assembly

Specifications

Power Supply	
Ambient Operating Temperature	10 - 40°C
Maximum Enclosure Temperature	65°C
Input Line Voltage	90 - 240 VAC
Input Line Frequency	50/60 Hz
Power Consumption	50 Watts max.
Output Power	35 Watts max. at 22°C ambient temperature
Output Frequency	470 KHz
Power Cord (3-wire)	183cm (72")
Dimensions (W x D x H)	70mm x 161mm x 100mm (2.76" x 6.34" x 3.94")

Lead-Free Process Identification

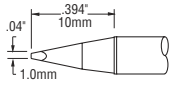
For factories that are transitioning to lead-free, it is important to identify which processes are using lead-free to avoid accidental cross-contamination of solder materials. To easily identify the lead-free processes, we have designed visual indicators that fit on the system parts where cross-contamination can occur, such as tips & workstand sponges.

Part No.	Description
PS-WSAS-G	Auto Sleep Workstand with Green Cradle
AC-CK1	Green cartridge identification ring for PHT Consumables (Pack of 50)

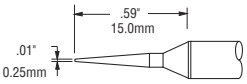
Accessories & Spare Parts

Part No.	Description
PS-PW1	PS-800 Power Supply
PS-WSK1	PS-800 Workstand with Sponge
PS-WSC1	PS-800 Cradle
PS-WSAS	PS-800 Auto Sleep Workstand with Sponge
AC-YS4	Sponge 3.12" ø x 1" (pack of 10)
PS-HC1	PS-800 Soldering Handle with Coil Assembly
PS-CA1	PS-800 Coil Assembly
AC-CP2	Heater Tip Removal Pad
AC-PM	Power Meter – AC

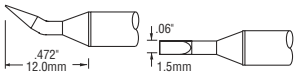
PS-800 Heater Tips



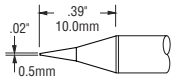
PHT-XY0315
Chisel Fine 30° 1.0mm (.04")



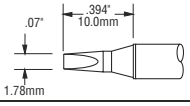
PHT-XY2017
Conical 60° 0.25mm (.01")



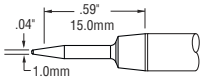
PHT-XY0326
Chisel Fine/Bent 30° 1.5mm (.06")



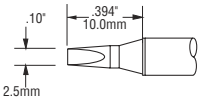
PHT-XY2035
Conical Fine 0.5mm (.02")



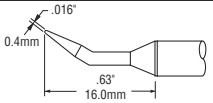
PHT-XY0335
Chisel Fine 30° 1.78mm (.07")



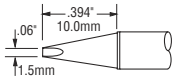
PHT-XY2057
Conical Fine 1.0mm (.04")



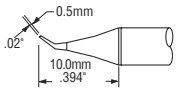
PHT-XY1355
Chisel 30° 2.5mm (.10")



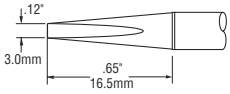
PHT-XY2327
Conical Fine/Bent 0.4mm (.016")



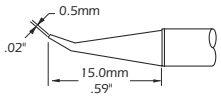
PHT-XY0325
Chisel 60° 1.5mm (.06")



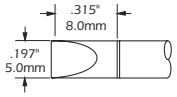
PHT-XY2335
Conical Fine 30° 0.5mm (.02")



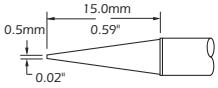
PHT-XY1367
Chisel 30° 3.0mm (.12")



PHT-XY2337
Conical Fine/Bent 30° 0.5mm (.02")



PHT-XY1384
Chisel 30° 5.0mm (.197")

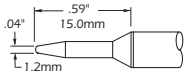


PHT-XY3035
Conical 30° 0.5mm (.02")

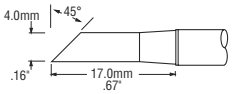
650 Series XY = 65, 750 Series XY = 75

Dimensions and artwork listed are for indication/guidance only. Numbers have been rounded up.
Please contact your local technical support if you require specific technical information.

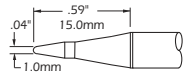
PS-800 Heater Tips



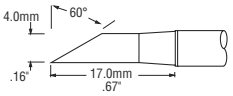
PHT-XY3047
Conical 1.2mm (.05")



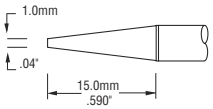
PHT-XY4497
Hoof 45° 4.0mm (.16")



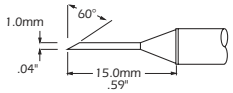
PHT-XY3057
Power Conical 1.0mm (.04")



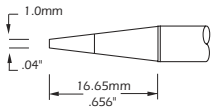
PHT-XY4697
Hoof 60° 4.0mm (.16")



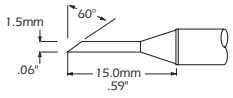
PHT-XY3067
Conical Long 1.0mm (.04")



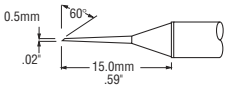
PHT-XY4627F
Mini Hoof 60° Face Only 1.0mm (.04")



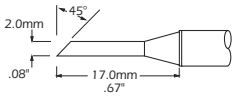
PHT-XY3077
Power Conical 1.0mm (.04")



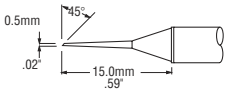
PHT-XY4637F
Mini Hoof 60° Face Only 1.5mm (.06")



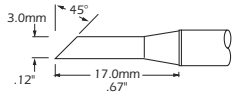
PHT-XY4607
Mini Hoof 60° 0.5mm (.02")



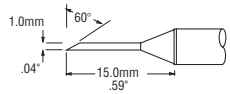
PHT-XY4467F
Hoof 45° Face Only 2.0mm (.08")



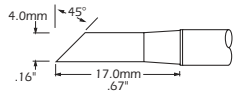
PHT-XY4617
Mini Hoof 45° 0.5mm (.02")



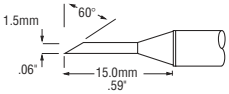
PHT-XY4487F
Hoof 45° Face Only 3.0mm (.12")



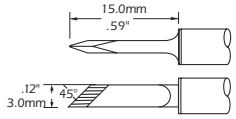
PHT-XY4627
Mini Hoof 60° 1.0mm (.04")



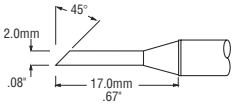
PHT-XY4497F
Hoof 45°, 4.0mm (.16")



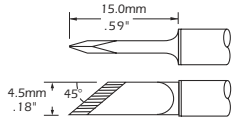
PHT-XY4637
Mini Hoof 60° 1.5mm (.06")



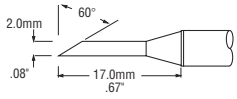
PHT-XY5437
Knife Sharp 45° 3.0mm (.12")



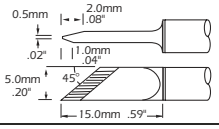
PHT-XY4467
Hoof 45° 2.0mm (.08")



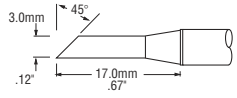
PHT-XY5457
Knife Sharp 45° 4.5mm (.18")



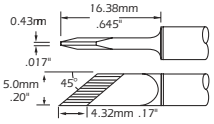
PHT-XY4667
Hoof 60° 2.0mm (.08")



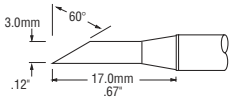
PHT-XY5477
Knife Bevel 45° 5.0mm (.20")



PHT-XY4487
Hoof 45° 3.0mm (.12")



PHT-XY5487
Knife Sharp 45° 5.0mm (.20")

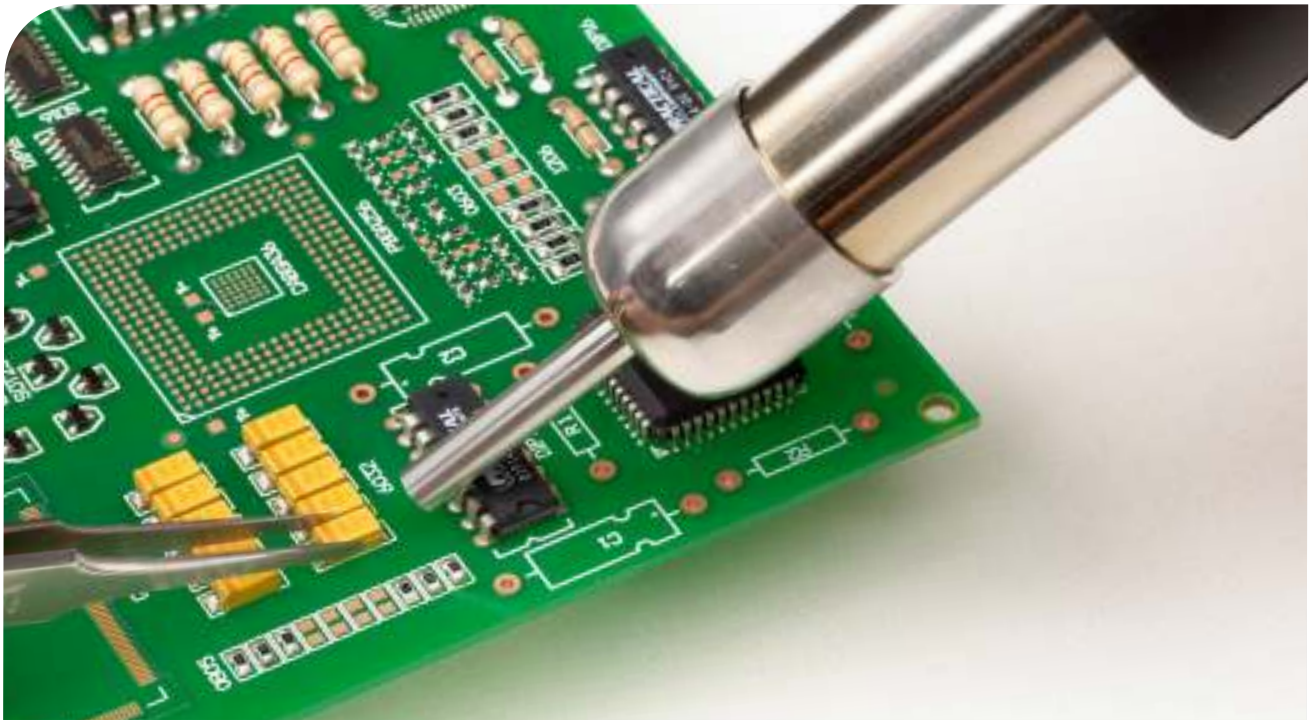


PHT-XY4687
Hoof 60° 3.0mm (.12")

650 Series XY = 65, 750 Series XY = 75

Dimensions and artwork listed are for indication/guidance only. Numbers have been rounded up.
Please contact your local technical support if you require specific technical information.

HCT-900 Hand Held Convection Tool



Versatile Hot Air Tool for Soldering and Desoldering Applications

The HCT-900 Hand Held Convection Tool offers a low cost, versatile rework solution for a wide variety of production and rework application challenges. It has a simple, compact robust design comprising of analog controls for both airflow and heat. A closed loop feedback circuit controls the temperature allowing the desired temperature to be achieved and maintained regardless of changes in the volume of airflow.

The HCT-900 can be used for the removal and refitting of electronic components, including lead-free, from 0201 up to 304 pin QFP. It is also effective at reworking pin in-hole devices such as sockets and connectors. And, using it with solder braid and flux is a fast and efficient way to remove solder shorts and splashes. It can also be used in plastic applications such as applying shrink wrap to components or the formation of plastic rivets.

The unique low noise air pump (less than 45 db) provides precise airflow control for the most demanding applications. The “power off” cool down function retains airflow through the hand piece while the unit powers down, providing efficient heater cooling and reducing thermal stress.

The HCT-900 is fully ESD compliant.

Part No.	Description
HCT-900-11	115 VAC, Hand Held Convection Tool
HCT-900-21	230 VAC, Hand Held Convection Tool
HCT-900-10	100 VAC, Hand Held Convection Tool

Contents of this brochure subject to change without notice

Nozzle Selection

The HCT-900 is supplied with a standard single jet H-D50 (0.2", 5.0 mm) nozzle. In addition two rework nozzle kits, predefined for specific applications, are available, as well as a full selection of nozzles.

Part No.	Description
NZKT-1	Nozzle Kit for Chip Resistors, SOIC & TSOP Packages. Includes (one each): **• H-D25 • H-SL16 • H-SL28** **• H-SOJ40 • H-TS48**
NZKT-2	Nozzle Kit for PLCC, QFP & BQFP packages. Includes (one each): **• H-P20 • H-P44 • H-P84** **• H-Q1420 • H-Q2626**

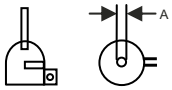
PLCC,BQFP,QFP

Model	Chip Type	A mm (in)	B mm (in)
H-P20	PLCC-20	11.9 (0.47")	11.9 (0.47")
H-P28	PLCC-28	14.5 (0.57")	14.5 (0.57")
H-P32	PLCC-32	16.9 (0.67")	14.3 (0.56")
H-P44	PLCC-44	19.5 (0.77")	19.5 (0.77")
H-P52	PLCC-52	22.0 (0.86")	22.1 (0.87")
H-P68	PLCC-68	27.0 (1.06")	27.2 (1.07")
H-P84	PLCC-84	32.4 (1.28")	32.4 (1.28")
H-Q07	QFP-48	8.4 (0.33")	8.4 (0.33")
H-Q10	QFP-44	13.4 (0.53")	13.4 (0.53")
H-Q14	QFP-52,80	17.3 (0.68")	17.3 (0.68")
H-Q1420	QFP-64,80,100	23.4 (0.92")	18.1 (0.71")
H-Q28	QFP-120,128,144,160	31.2 (1.23")	31.2 (1.23")
H-BQ23	BQFP-100	22.4 (0.88")	22.4 (0.88")
H-Q3232	QFP-240	34.5 (1.36")	34.5 (1.36")
H-BQ38	BQFP-196	37.7 (1.48")	37.7 (1.48")
H-Q2626	QFP-208	29.8 (1.17")	29.8 (1.17")

SOIC, TSOP

H-S16	SOIC 14,16	6.8 (0.27")	10.2 (0.4")
H-SL16	SOL 14,16	10.6 (0.41")	10.8 (0.43")
H-SL20	SOL 20,20J	10.6 (0.41")	13.3 (0.52")
H-SL24	SOL 24,24J	10.6 (0.41")	15.9 (0.63")
H-SL28	SOL 28	10.6 (0.41")	18.4 (0.72")
H-SL44	SOL 44	16.0 (0.41")	27.9 (1.1")
H-SOJ32	SOJ 32	13.5 (0.53")	20.6 (0.81")
H-SOJ40	SOJ 40	13.5 (0.53")	25.4 (1.0")
H-TS24	TSOP 20-24	17.0 (0.67")	7.1 (0.28")
H-TS32	TSOP 28-32	21.0 (0.83")	9.1 (0.36")
H-TS40	TSOP 40	21.0 (0.83")	10.8 (0.43")
H-TS48	TSOP 48	21.0 (0.83")	13.3 (0.52")
H-TSW24	TSOP 20-24	10.2 (0.4")	18.4 (0.72")
H-TSW44	TSOP 24-28/40-44	12.7 (0.5")	19.8 (1.78")

CHIP & SOT



Model	Ø A (mm)
H-D25	2.5 (0.1")
H-D50	5.0 (0.2")
H-D120	12.0(0.47")

Specifications

Input Line Voltage	115 VAC HCT-900-11 230 VAC HCT-900-21 100 VAC HCT-900-10
Power	320 W
Air Pump Type	Diaphragm
Air Flow	6-25 l/min.
Control Temperature	100°C – 500°C (212°F – 932°F)
Dimensions w x l x h	6.7"x 8.7" x 5.5" inches, 170 x 210 x 140 mm
Noise Level	Less than 46 dBA
Surface Resistivity	Unit: $10^5\Omega$ – $10^6\Omega$. Hand-piece & tube: $10^7\Omega$ – $10^{11}\Omega$
Weight	10.4 lbs. (4.7 kg.)
Certification / Approvals	cTUVus, CE

OK International has a full range of products for the electronics assembly work bench to meet your application needs.

OK International's full range of soldering, desoldering and rework systems is complemented by a line of benchtop fume extraction systems that range from tip extraction to multi-user units. Our rework and repair equipment offers best-in-class performance for BGA and array package rework. OK International also has a comprehensive line of fluid dispensing products, including valves, equipment and consumables. OK International products conform to global industry standards, and meet today's high standards of precision and performance.

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OK International provides solution based technologies to electronics manufacturing industries throughout the world. Through our sales, service and distribution centers located in North America, Europe and Asia we are able to provide seamless, proactive expertise and support to our customers worldwide.

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