

MFR-2200 Series Dual Output

[Soldering, Desoldering & 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 27 & 29).



MFR-2200 Systems

All include MFR-PS2200 power supply



MFR-2210
Includes: A(1), D(1)



MFR-2211
Includes: A(2), D(2)



MFR-2220
Includes: B(1), D(1)



MFR-2222
Includes: B(2), D(2)



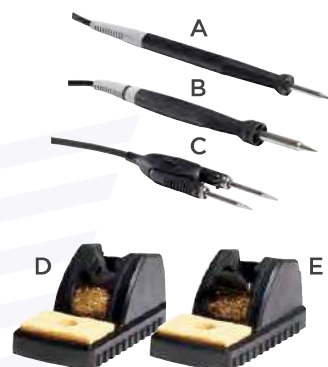
MFR-2240
Includes: C(1), E(1)



MFR-2241
Includes: A(1), C(1), D(1), E(1)

System Components

A	MFR-H1-SC2 Soldering Cartridge Hand-piece
B	MFR-H2-ST2 Soldering Tip Hand-piece
C	MFR-H4-TW Tweezer Hand-piece
D	WS1 Universal Soldering Workstand
E	MFR-WSPT Tweezer Workstand



Applicable Soldering Cartridges & Tips (Partial list)

SxP
Soldering Cartridges



RxP
Rework Cartridges



Full range on pages 34-35

SxV
Soldering Tips



CxV
Blade Tips



Full range on pages 32-33



TxP
Tweezer Cartridges



Full range on pages 36

MFR-1100 Series Single Output

[Soldering, Desoldering & 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 27 & 29).

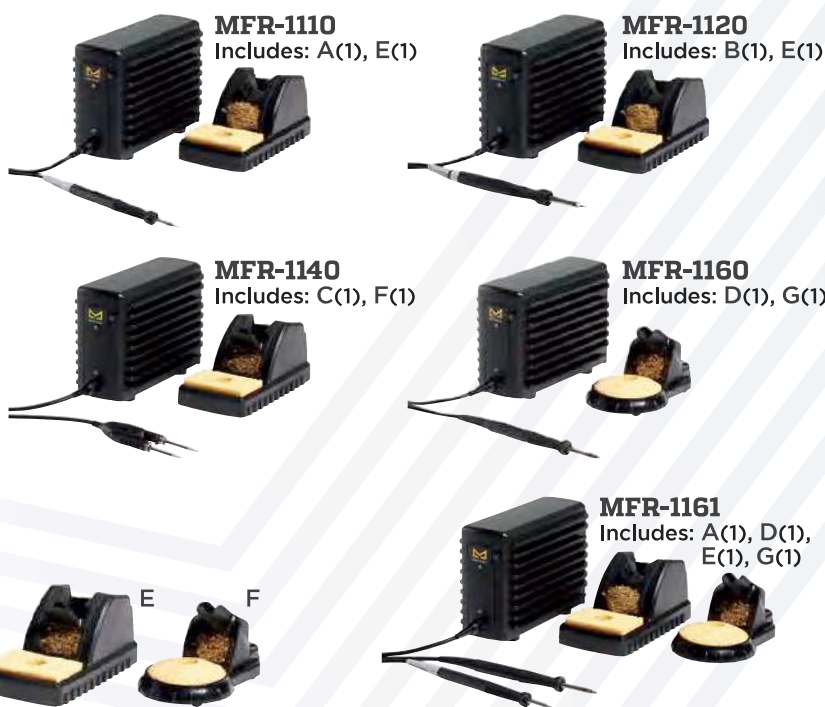


System Components

A	MFR-H1-SC2 Soldering Cartridge Hand-piece
B	MFR-H2-ST2 Soldering Tip Hand-piece
C	MFR-H4-TW Tweezer Hand-piece
D	WS1 Universal Soldering Workstand
E	MFR-WSPT Tweezer Workstand
F	WS2 Round Soldering Workstand
G	MFR-H6-SSC SSC Cartridge Hand-piece

MFR-1100 Systems

All include MFR-PS1100 power supply



Applicable Soldering Cartridges & Tips (Partial list)

SxP
Soldering Cartridges

RxP
Rework Cartridges

Full range on pages 34-35

SxV
Soldering Tips

CxV
Blade Tips

Full range on pages 32-33

SSC
Soldering Cartridges
(Previous SP200 System)

TxP
Tweezer Cartridges

Full range on pages 36 & 37



MFR-1100 & MFR-2200 Series

[Soldering & Rework Systems]

Exceptional Power. Maximize Solutions.



System Specification	MFR-PS1100	MFR-PS2200
Input Line Voltage	100 - 240 VAC, grounded circuit, 50/60 Hz	
Rated Power Consumption	70 W max.	130 W max.
Output Power	Variable, 60 W max.*	Variable, 2 x 60 W max.*
Output Frequency	450 KHz	
Heating Method	Induction, SmartHeat®	
Connections	Single Port	Dual Port
Power Supply Dim. W x D x H	90 x 200 x 152.5 mm (3.5" x 7.9" x 6")	120 x 200 x 152.5 mm (4.7" x 7.9" x 6")
Power Supply Weight	2.3 kg (5.05 lb)	2.97 kg (6.55 lb)
Certification / Marking	cTUVus, CE	
Tip-to- Ground Potential	< 2 mV	
Tip-to-Ground Resistance	< 2 Ohm	
Ground Detection	Permanent	
Surface Resistivity	10 ⁵ - 10 ⁹ Ohm	
Idle Temperature Stability	1.1 °C (2 °F) in still air	
Tip Temperature Accuracy	Meets or exceeds IPC J-STD-001 Standard	
Warranty	1 year	

*RF SmartHeat® Technology provides greater power.

Soldering Handle and Coil Assembly	
Tip-to-Ground Potential	< 2 mV RMS
Tip-to-Ground Resistance	< 2 Ohm
Idle Temperature Repeatability	1.1 °C (2 °F) in still air
Handle Cord Assembly Length	122 cm – burn proof, ESD safe
Connector	8-pin circular DIN

Accessories

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



Key Features & Benefits

- SmartHeat® Technology provides exceptional power for high thermal demand applications
- Single or Dual simultaneous outputs allow for single/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

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.

Metcal's MFR-1150 Desoldering System is a powerful, cost effective system with a small footprint. The MFR-1150 has a powerful 0.85 bar vacuum built into the workstand which makes throughhole desoldering clean and easy.

The MFR-1150 system includes a Desoldering Pistol with an easy to change, large capacity solder collection chamber to ensure minimum downtime. The pistol can easily be converted to a pencil grip for additional control. Metcal offers a wide range of long life desoldering tips that will keep your equipment working efficiently.



DxP
Desoldering Tips



Full range on page 36



Remove grip for
Pencil configuration



Collection chamber
replacement

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)



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

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

Part Number	Description
MFR-1150	Complete System (Includes parts listed below)
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
AC-CP2	Cartridge and Tip Removal Pad

MFR-1350 Dual Switchable Output

[Soldering & Desoldering Systems with Internal Air]

The MFR-1350 Desoldering and Rework System

features an 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.

SxP

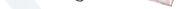
Soldering Cartridges



Full range on page 34

RxP

Rework Cartridges



Full range on page 35

DxP

Desoldering Tips



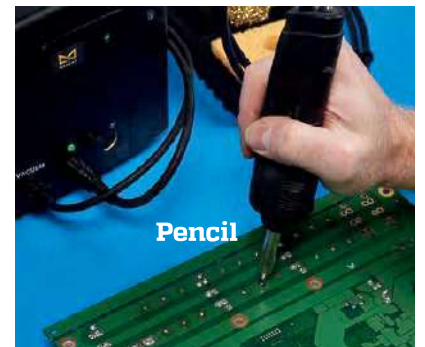
Full range on page 36



System Specification - MFR-PS1350

Input Line Voltage	100 - 240 VAC, grounded circuit, 50/60 Hz
Rated Power Consumption	110 W max.
Output Power	Variable, 60 W max.*
Output Frequency	450 KHz
Heating Method	Induction, SmartHeat®
Connections	Switchable Dual Port
Power Supply Dim. W x D x H	170 x 200 x 152.5 mm (6.7" x 7.9" x 6")
Power Supply Weight	3.9 kg (8.6 lb)
Certification / Marking	cTUVus, CE
Tip-to- Ground Potential	< 2 mV
Tip-to-Ground Resistance	< 2 Ohm
Ground Detection	Permanent
Surface Resistivity	10 ⁵ - 10 ⁹ Ohm
Idle Temperature Stability	1.1 °C (2 °F) in still air
Tip Temperature Accuracy	Meets or exceeds IPC J-STD-001 Standard
Vacuum Suction Force	0.7 bar (21" Hg at Vacuum pump)
Noise Level	< 55 dB
Warranty	1 year

*RF SmartHeat® Technology provides greater power.



Pencil



Pistol

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 includes power supply, desolder hand-piece and workstand
MFR-1351	Solder/Desolder System with internal pump includes power supply, desolder hand-piece, solder hand-piece, and (2) workstands
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

MFR/PS Accessories and Spare Parts

[Soldering, Production Soldering & Rework Systems]



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 MFR-WSDSX Desolder Workstand

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

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-TW) 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 (WS2)
MFR-H5-DS-C		Desolder Hand-piece (MFR-H5-DS) and Workstand cradle (MFR-WSDSCB)