



## SUPPORT PRODUCTS AND CONSUMABLES

SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

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# ST Systems

## Optional Items and Replacement Parts



DESCRIPTION	PART NUMBERS
Power Cord (Domestic Systems only)	1332-0094-P1
Power Cord (Export Systems)	1332-0093-P1
Fiber Cleaning Tool for Surface Mount Tips	1100-0232
Sponge Cleaning Tool for Surface Mount Tips	1100-0233-P1
Replacement Fiber Filler (for Fiber Cleaning Tool)	1127-0013-P2
Replacement Sponge filler (for sponge cleaning tip)	4021-0006-P5
Replacement Sponges for Tip and Tool Stand (Before 11-07)	4021-0008-P3
Power Switch (All ST Series)	1157-0081-P1
PCB ST 125/125E	6020-0185-P1
PCB ST 145/145E	6020-0186-P1
ST 75/115 Motor Pump Assembly	1336-0037-P1
Motor Pump Rebuild Kit for ST 75/115	6993-0260-P1
ST 25 pcb	6020-0188-P1
ST 30, ST 65 & ST 75 pcb (IntelliHeat)	6020-0208-P1
ST 50 & ST 115 pcb (IntelliHeat)	6020-0209-P1
ST 70 pcb	6020-0210-P1
ST 100 pcb	6020-0211-P1
ST 65 Venturi Kit	6993-0201-P1
Bulk Head Fitting	1259-0081-P1

# ST Systems

## Optional Items and Replacement Parts



DESCRIPTION	PART NUMBERS
ST 70 Power Module Heat Level 5	1207-0446-01-P1
ST 70 Power Module Heat Level 5.5	1207-0446-02-P1
ST 70 Power Module Heat Level 6	1207-0446-03-P1
ST 70 Power Module Heat Level 6.5	1207-0446-04-P1
ST 70 Power Module Heat Level 7	1207-0446-05-P1
ST 70 Power Module Heat Level 7.5	1207-0446-06-P1
ST 70 Power Module Heat Level 8	1207-0446-07-P1
ST 70 Power Module Heat Level 8.5	1207-0446-08-P1
Fuse, 115V ST 25, 30, 50, 65, 75, 115	1159-0246-P5
Fuse, 230V ST 25E, 30E, 50E, 65E, 75E, 115E	1159-0213-P5
Fuse, 115V ST 100	1159-0275-01-P5
Fuse, 230V ST 100E	1159-0275-02-P5

# MBT 250, 301 & 350

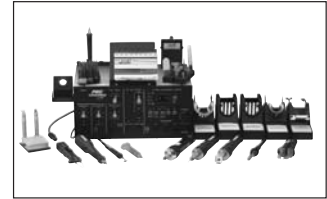
## Optional Items and Replacement Parts



DESCRIPTION	PART NUMBERS
Fuse MBT 301/350 115V	1159-0275-01-P5
Fuse MBT 301E/350E 230V	1159-0275-02-P5
Motor Pump Rebuild Kit (Pump date code of 37780 or lower MBT 250/E)	6993-0190-P1
Motor Pump Assembly MBT 250/E with date code of 37781 and higher	1336-0064-P1
Motor Pump Rebuild Kit for 1336-0064-P1 and 1336-0083-P1	6993-0260-P1
Motor Pump Filter	1309-0020-P1
Power Cord (MBT 250 Domestic Systems only)	1332-0094-P1
Power Cord (MBT 250 Export Systems only)	1332-0093-P1
Fuse, 2.0A SloBlo (MBT 250 Domestic Systems only)	1159-0247-P5
Fuse, 1.25A SloBlo (MBT 250 Export Systems only)	1159-0217-P5
Fiber Cleaning Tool for Surface Mount Tips	1100-0232-P1
Replacement Fiber Filler (for Fiber Cleaning Tool)	1127-0013-P2
Sponge Cleaning Tool for Surface Mount Tips	1100-0233-P1
Replacement Sponge Filler (for Sponge Cleaning Tool)	4021-0006-P5
Replacement Sponges for Tip & Tool Stand (SX, PS, SP)	4021-0008-P3
Sponges for Tip Maintenance Station	4021-0007-P7
Quick-Disconnect Insert (Male)	1259-0087-P1
Quick-Disconnect Receptacle (Female)	1259-0086-P1
Vacuum Tubing, black silicon 1370mm (54")	1342-0015-08-P1
Cable Marker Kit (Colored Tabs for hose/cord identification)	P6993-0136-P1
Air Pressure Control Valve Assembly	1222-0081-P1
Vacuum, Panel Mount	1259-0085-P1
Main Power Switch (Units built after 8/00)	1157-0081-P1
Printed Circuit Board (MBT 250A / 250AE)	6020-0091-P1
Display Printed Circuit Board (MBT 250A / 250AE)	6020-0063-P1
Rubber Foot	1274-0021-P4
MBT 301/350 Motor Pump Assembly	1336-0083-P1
MBT 301 pcb	6020-0207-P1
MBT 350 pcb	6020-0204-P1

# PRC Systems

## Optional Items and Replacement Parts



DESCRIPTION	PART NUMBERS
Tip Redi-Rak	6021-0007-P1
Tip & Tool Stand Tip Redi-Rak (included with Standard Version)	6021-0008-P1
Tip and Vacuum Cup Tool	1100-0239
Cushion Grip Kit for ThermoTweez Handpiece (requires a 6019-0056 TT Tip & Tool Stand)	6993-0184
One Year Consumables Kit	6550-0020
Auto Snap Vac Kit	6993-0193
Tip and Temperature Selection System (charts only)	5050-0251

## PRC 2000/Replacement Parts

DESCRIPTION	PART NUMBERS
Motor Pump Assembly Kit (for desoldering function)	6993-0188
Pump Rebuild Kit (for desoldering function)	6993-0190-P1
Micro Pump Assembly (for Paste Dispenser)	1336-0027-P1
Low Pressure Pik Pump Assembly	1334-0021-P1
Power Cord (PRC 2000 Domestic Systems only)	1332-0094-P1
Power Cord (PRC 2000 Export Systems only)	1332-0093-P1
Fuse, 5.0 Amp, Time Lag (PRC 2000 Domestic Systems only)	1159-0253-P5
Fuse, 12.0 Amp, (PRC 2000 Domestic and Export Systems)	1159-0257-P5
Air Pressure Control Valve Assembly	1222-0081-P1
Vacuum, Panel Mount	1259-0085-P1
Main Power Switch	1157-0052-P1
Fiber Cleaning Tool for Surface Mount Tips	1100-0232-P1
Replacement Fiber Filler (for Fiber Cleaning Tool)	1127-0013-P2
Sponge Cleaning Tool for Surface Mount Tips	1100-0233-P1
Replacement Sponge Filler (for Sponge Cleaning Tool)	4021-0006-P5
Replacement Sponges for Tip & Tool Stand (SX, PS, SP)	4021-0008-P3
Sponges for Tip Maintenance Station	4021-0007-P7
Quick-Disconnect Insert (Male)	1259-0087-P1
Quick-Disconnect Receptacle (Female)	1259-0086-P1
Paste Dispense Tubing, Clear PVC 915mm (36")	1325-0003-10
Vacuum Tubing, Black Silicon 1370mm (54")	1342-0015-08-P1
Cable Marker Kit (colored tabs for hose/cord identification)	6993-0136-P1
Paste Dispenser Cubby	6019-0038-P1
Accessory Kit for Paste Dispenser	6993-0152-P1
Vacuum Cups for Pik-Vac Wand	6993-0154-P1
PCB Assembly, Microprocessor, PPS-400/E	6020-0072-P1
PCB, Display, PPS-400/E	6020-0073-P1
PCB, Multifunction, PPS-400/E	6020-0074-P1
Pressure Reservoir	1140-0034-P1
Foot Pedal MBT/PRC	6008-0115-P1
10cc Barrel Adapter	1259-0091-P1
SMR Cubby Kit	6019-0022-P1
Redi-Rak Handpiece Kit	6019-0023-P1
Motor Pump Filter	1309-0020-P1
Solenoid, 12V, 6W	1194-0016-P1
Terminal Post, Black	1205-0045-P1
Rubber Foot	1274-0021-P4

# ST Hot Air Systems

## Optional Items and Replacement Parts



DESCRIPTION	PART NUMBERS
ST 300 Handpiece with Front Panel 115V ST 300 Handpiece with Front Panel 230V ST 325 Handpiece with Front Panel 115V ST 325 Handpiece with Front Panel 230V Handpiece Cubby ST 300/ST325	6010-0145-01-P1 6010-0146-01-P1 6010-0145-P1 6010-0146-P1 6019-0048-P1
PCB ST 300/ST 300E PCB ST 325/ST 325E & ST 350/ST 350E	6020-0163-P1 6020-0190-P1
Fuse, 7 A, 125V ST 300/325/350 Fuse, 5A, 230V, ST 300E/325E/350E Fuse, 1A, 125V ST 300 Fuse, 0.5 A 125V ST 325/350 Fuse, 0.5A 23 V, ST 300E/325E/350E	1159-0274-P5 1159-0266-P5 1159-0246-P5 1159-0248-P5 1159-0213-P5
PCB Support ST 350 Calibration Nozzle ST 325/350 ST 325/350 PC Software	6000-0287-P1 4028-2010-P1 1199-0019-P1
Blower Pump ST 300, ST 325 & 350 Vacuum Pump ST 300, ST 325 & 350 Heater 115V ST 300/325/350 Heater 230V ST 300/325/350	1336-0073-P1 1336-0078-P1 6010-0091-P1 6010-0122-P1
Replacement Vacuum Pik Kit ST 300/ST 325 115V Replacement Vacuum Pik Kit ST 300E/ST 325E 230V Replacement Vacuum Pik Kit ST 350 115V Replacement Vacuum Pik Kit ST 350E 230V	6993-0198-P1 6993-0256-P1 6000-0283-P1 6000-0284-P1

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# ST Hot Air Systems

## Optional Items and Replacement Parts




DESCRIPTION	PART NUMBERS
Power Cord, 115V (ST 300, ST 325, ST 350)	1332-0094-P1
Power Cord, 230V (ST 300E, ST 325E, ST 350E)	1332-0093-P1
PV-65 Handpiece (ST 300, ST 325, ST 350)	7027-0001-P1
Nozzle Adapter (ST 300, ST 325, ST 350)	4028-0001-P1
Hot Grip Removal Pad (ST 300, ST 325, ST 350)	1100-0307-P1
Hose Retention Kit	6018-0096-P1
Vacuum Cup part numbers;	
Vacuum Cup Kit	6993-0196-P1
Vacuum Cup, Individual, 15.88mm (0.625") Diameter	1121-0280-P2
Vacuum Cup, Individual, 10.16mm (0.400") Diameter	1121-0281-P2
Vacuum Cup, Individual, 7.94mm (0.312") Diameter	1121-0282-P1
Vacuum Cup, Individual, 4.95mm (0.195") Diameter	1121-0382-P5
Vacuum Cup, Individual, 7.62mm (0.300") Diameter	1121-0383-P5
Vacuum Cup, Individual, 12.70mm (0.500") Diameter	1121-0384-P5
ST 500 Handpiece Fixture	6018-0129-P1
Swivel Ring	1321-0320-P1
ST 525 Board Holder	6993-0253-P1
ST 550 Board Holder	6993-0254-P1



# Hot Air Nozzles

Listed below are standard nozzles available from PACE. Custom nozzles can be designed and manufactured for special or non-standard applications. Contact PACE for more information. Alignment templates are included with BGA nozzle assemblies.

## Standard Nozzles for ST 300/325/350 Systems


BGA NOZZLES	BGA SIZE (NOMINAL)	PART NUMBERS
	26.4mm x 26.4mm (1.04" x 1.04")	4028-5001
	22.3mm x 22.3mm (0.89" x 0.89")	4028-5002
	34.4mm x 34.4mm (1.35" x 1.35")	4028-5003
	12.3mm x 12.3mm (0.48" x 0.48")	4028-5004
	14.4mm x 14.4mm (0.57" x 0.57")	4028-5005
	15.5mm x 17mm (0.61" x 0.67")	4028-5006
	13.5mm x 15mm (0.53" x 0.59")	4028-5007
	10.5mm x 10.5mm (0.41" x 0.41")	4028-5008
	12mm x 13.3 mm (0.47" x 0.52")	4028-5009
	8.7mm x 8.90mm (0.34" x 0.35")	4028-5010
	24.3mm x 24.3mm (0.96" x 0.96")	4028-5011
	39.2mm x 39.2mm (1.54" x 1.54")	4028-5012
	41.7mm x 41.7mm (1.64" x 1.64")	4028-5013
	30.3mm x 30.3mm (1.19" x 1.19")	4028-5014
	16.3mm x 16.3mm (0.64" x 0.64")	4028-5015
	20.3 mm x 20.3 mm (0.80" x 0.80")	4028-5016
	20.3mm x 20.3mm (0.80" x 0.80")	4028-5017 (short adapter)
	36.8mm x 36.8mm (1.45" x 1.45")	4028-5018
	18.3mm x 18.3mm (0.72" x 0.72")	4028-5019
	31.3mm x 31.3mm (1.23" x 1.23")	4028-5020
	28.3mm x 28.3mm (1.11" x 1.11")	4028-5021
	15.3mm x 15.3mm (0.60" x 0.60")	4028-5022
	13.2mm x 21.2mm (0.52" x 0.83")	4028-5023
	18.5mm x 18.5mm (0.73" x 0.73")	4028-5024
	17.8mm x 17.8mm (0.70" x 0.70")	4028-5025
	25.7mm x 25.7mm (1.01" x 1.01")	4028-5026
	29.3mm x 29.3mm (1.15" x 1.15")	4028-5027
	24.3mm x 31.6mm (0.96" x 1.24")	4028-5028
	42.3mm x 42.3mm (1.66" x 1.66")	4028-5029
	43.3mm x 43.3mm (1.70" x 1.70")	4028-5030
	21.3mm x 21.3mm (0.84" x 0.84")	4028-5032
	32.3mm x 32.3mm (1.24" x 1.24")	4028-5033
46.8mm x 46.8mm (1.84" x 1.84")	4028-5034	
20.3 mm x 24mm (0.80" x 0.94")	4028-5035	
16.3mm x 16.3 (0.64" x 0.64")	4028-5036 (short adapter)	
20.3mm x 20.3mm (0.80" x 0.80")	4028-5037 (small cup)	
6mm x 8mm (0.24" x 0.32")	4028-5501	
6.55mm x 8mm (0.26" x 0.32")	4028-5502	
Calibration Nozzle	4028-2010	



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# Hot Air Nozzles

Listed below are standard nozzles available from PACE. Custom nozzles can be designed and manufactured for special or non-standard applications. Contact PACE for more information.

## Standard Nozzles for ST 300/325/350 Systems

PATTERN NOZZLES	JET SPACING	JET LENGTH	PART NUMBERS
	4mm (0.16")	6.1mm (0.24")	4028-4001
	4mm (0.16")	10.9mm (0.43")	4028-4002
	7.9mm (0.31")	10.9mm (0.43")	4028-4003
	7.9mm (0.31")	13.5mm (0.53")	4028-4004
	7.9mm (0.31")	16mm (0.63")	4028-4005
	7.9mm (0.31")	18.5mm (0.73")	4028-4006
	11.7mm (0.46")	20.8mm (0.82")	4028-4007
	18.6mm (0.734")	11.68mm (0.460")	4028-4505
	10.4mm (0.41")	21.35mm (0.84")	4028-4506

SINGLE JET NOZZLES	SHAPE OF JET TUBING	NOZZLE SIZE (NOMINAL)	PART NUMBERS	
	Curved, Round	3.0mm diameter (0.1" diameter)	4028-1001-P1	
	Curved, Round	5.0mm diameter (0.2" diameter)	4028-1002-P1	
	Curved, Round	8.0mm diameter (0.3" diameter)	4028-1003-P1	
		Straight, Round	3.0mm diameter (0.01" diameter)	4028-1011-P1
		Straight, Round	5.0mm diameter (0.2" diameter)	4028-1012-P1
		Straight, Round	8.0mm diameter (0.3" diameter)	4028-1013-P1
		Flat Jet	13.2 mm length (0.52")	4028-1021-P1
	Flat Jet	23.4mm length (0.92")	4028-1022-P1	

BOX NOZZLES	NOZZLE SIZE (NOMINAL)	PART NUMBERS	
	8.6mm x 12.1 mm (0.34" x 0.48")	4028-2001	
	10.3mm x 10.3mm (0.41" x 0.41")	4028-2002	
	12.8mm x 12.8mm (0.51" x 0.51")	4028-2003	
	12.8mm x 15.39mm (0.50" x 0.61")	4028-2004	
	17.9mm x 17.9mm (0.70" x 0.70")	4028-2005	
	20.5mm x 20.5mm (0.81" x 0.81")	4028-2006	
	25.6mm x 25.6mm (1.01" x 1.01")	4028-2007	
	30.6mm x 30.6mm (1.20" x 1.20")	4028-2008	
	38.9mm x 38.9mm (1.53" x 1.53")	4028-2009	
		18.2mm x 24.2mm (0.72" x 0.95")	4028-2501
		17.1mm x 17.1mm (0.67" x 0.67")	4028-2502
		27mm x 27mm (1.06" x 1.06")	4028-2503
		31.95mm x 31.95mm (1.26" x 1.26")	4028-2504
		31.6mm x 31.6mm (1.24" x 1.24")	4028-2505
		34.7mm x 34.7mm (1.37" x 1.37")	4028-2506
		27.2mm x 27.2mm (1.07" x 1.07")	4028-2602
11.5mm x 11.5mm (0.453" x 0.453")	4028-3002		
15.5mm x 15.5mm (0.610" x 0.610")	4028-3004		
Calibration Nozzle	4028-2010		

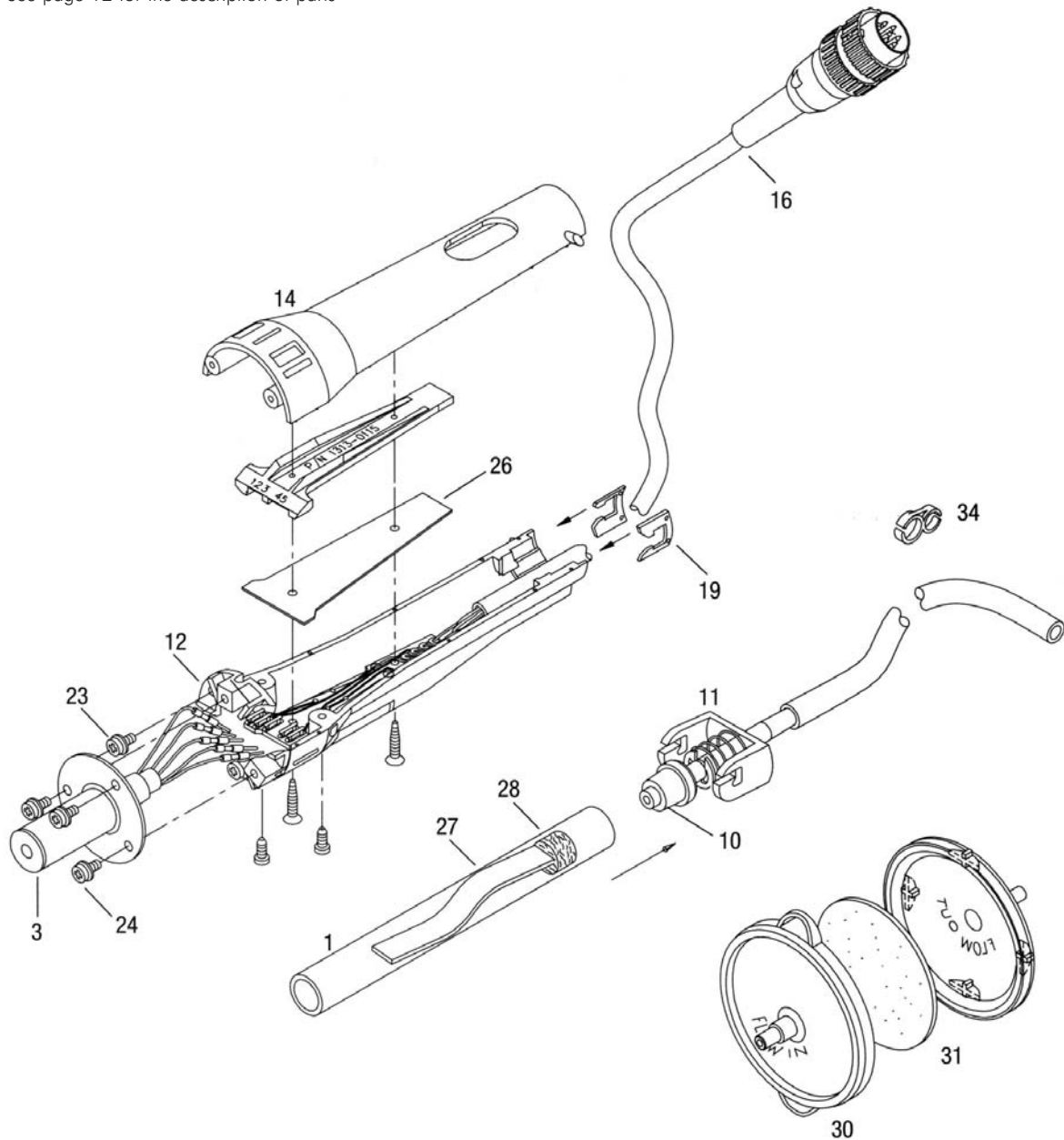
# SX-70 Handpiece

## SX-70 Replacement Parts Diagram



### SX-70 parts Diagram

See page 12 for the description of parts



# SX-70 Handpiece

## SX-70 Replacement Parts



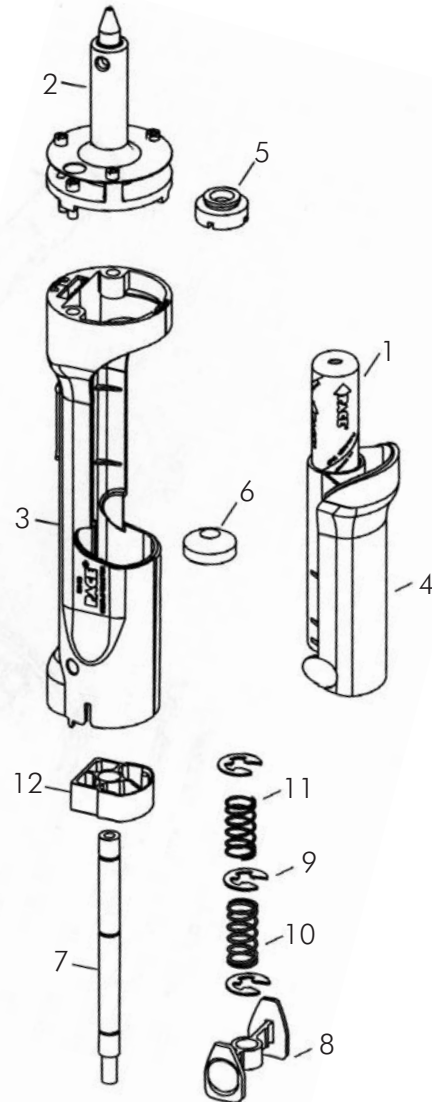
ITEM	DESCRIPTION	PART NUMBERS
1	Glass Chamber	1265-0009-P1
3	SX-70 Heater and Seal Assembly	6010-0080-P1
	Front Seal, Heater	1213-0033-P1
10	Rear Seal	1213-0001-P1
11	Rear Seal Retainer Assembly	4010-0106-P1
12	Heat Dissipator	1360-0005-P1
14	Replacement Handle Kit (SX, TP, TJ) (includes Top/Bottom Plates, Heat Dissipator, and Hardware)	6993-0140
	Replacement Hardware Kit (SX, TP, TJ) (includes Screws and Handle Clips)	6993-0189-P1
14	Switch and Cord Assembly (SX-70 only)	4010-0098-P1
16	Handle Clips	1209-0006-P5
19	Replacement Button	1119-0119-P1
	Dissipator Mounting Screws (mounts dissipator to handle)	1405-0534-P3
23	Heater Mounting Screws	1405-0395-P3
24	Solder Shield (comes with the purchase of any Heater Assembly)	1213-0072-P10
26	"S" Baffle	4010-0033-P1
27	Sodr-X-Tractor Filter	
28	Package of 10	1309-0018-P10
	Package of 50	1309-0018-P50
	VisiFilter, Fixed	1309-0020-P1
30	VisiFilter, Replaceable	1309-0028-P1
30	Replaceable VisiFilter Elements	
	Package of 10	1309-0027-P10
	Package of 25	1309-0027-P25
	Package of 50	1309-0027-P50
	Tubing, Length 1370mm (54") Black	1342-0015-08-P1
	Black Hose Clamps	1321-0085-01-P6
34	Hose Fitting, Female (Quick Disconnect)	1259-0086-P1
	Hose Fitting, Male (Quick Disconnect)	1259-0087-P1
	Tubing, Length (2 ") Translucent	1342-0001-01-P1
	6 Conductor Cable Assembly	1332-0148-P1
	Gender Bender Adaptor (Allows SensaTemp Handpieces to be used on IntelliHeat power sources)	6993-0278-P1
	SX Tool Stand (Available November 2007)	6019-0082-P1

# SX-90 Handpiece

## SX-90 Replacement Parts



ITEM	DESCRIPTION	PART NUMBERS
	SX-90 SensaTemp Handpiece	6010-0106-P1
	SX-90 SensaTemp Kit (includes Handpiece, Tip & Tool Stand and Tip Tool)	6993-0213-P1
	SX-90 Handpiece IntelliHeat	6010-0149-P1
	SX-90 Handpiece Kit IntelliHeat	6993-0266-P1
	SX-90 Tip and Tool Stand	6019-0060-P1
1	FLUX/SODR TRAP (Package of 10)	1309-0054-P10
1	FLUX/SODR TRAP (Package of 100)	1309-0054-P100
2	SX-90 Heater Assembly (Black Connector also fits SX-80)	6010-0107 -P1
	SX-90 Heater Assembly (Blue Connector only fits SX-90's that come with Blue Connector heater)	6010-0163 -P1
3	Handle Assembly (Includes the Switch, PCB, and Cord Assembly) SensaTemp	6010-0115-P1
3	Handle Assembly (Includes the Switch, PCB, and Cord Assembly) IntelliHeat	6010-0162-P1
4	Door Assembly	1119-0141-P1
5	Front Seal	1213-0087-P1
6	Rear Seal	1213-0086-P1
7	Plunger Shaft	1261-0154-P1
8	Plunger Lock	1500-0063-P1
9	"C" Clips (3 pieces)	1348-0387-P3
10	Spring "Long Side"	1221-0136-P1
11	Spring "Short Side"	1221-0137-P1
12	Door Lock	1119-0142-P1
	VisiFilter, Fixed	1309-0020-P1
	VisiFilter, Replacement	1309-0028-P1
	Replaceable VisiFilter Elements	
	Package of 10	1309-0027-P10
	Package of 25	1309-0027-P25
	Package of 50	1309-0027-P50
	Tubing, 1370mm (54") Length Black	1342-0015-08-P1
	Hose Clamps	1321-0085-01-P6
	Hose Fitting, Female (Quick Disconnect)	1259-0086-P1
	Hose Fitting, Male (Quick Disconnect)	1259-0087 -P1
	Tubing, Silicon, 2" Length	1342-0001-01-P1
	Heater Set Screws	1348-0547-P10
	Button	1500-0064-P1
	Heat Sleeve Kit	6993-0229-P1
	Heat Sleeve Clip	1211-0064-P1
	Glass Flux Solder Trap Kit	6000-0212-P1
	Z-Baffle (for Glass Chamber)	4010-0115-P2
	Glass Chamber	1265-0011-P1
	<b>Sodr-X-Tractor Filters for Glass Chamber</b>	
	Package of 10	1309-0018-P10
	Package of 50	1309-0018-P50
	SX Tool Stand (Available November 2007)	6019-0082-P1
	Replacement Sponge for new tool stand	4021-0013-P5
	Replacement brass tip cleaner for new tool stand	1129-0018-P1



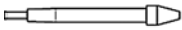


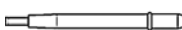


# Desoldering Tips

**Tips Selection:** One of the most important aspects for successful solder removal is the selection of the proper size tip.

There are several points to keep in mind.

1. The Inside Diameter (I.D.) of the tip must be large enough to fit over the lead, while providing sufficient room so that air and solder can be drawn through the tip.
2. The Outside Diameter (O.D.) of the tip must be slightly smaller than the diameter of the pad to prevent tip contact to the board laminate and minimize the possibility of damage.

## for the SX-90 - 3/16" Shank Diameter


TIPS	DESCRIPTION	DIAMETER	SX-90 P/N's*	Endura P/N's**
	Thermo-Drive	0.76mm (0.030") I.D. X 2.03mm (0.080") O.D.	1121-0930-P5	1121-0625-P5
	Thermo-Drive	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0931-P5	1121-0624-P5
	Thermo-Drive	1.52mm (0.060") I.D. X 3.05mm (0.120") O.D.	1121-0932-P5	1121-0626-P5
	Thermo-Drive	2.29mm (0.090") I.D. X 5.1mm (0.200") O.D.	1121-0933-P5	1121-0627-P5
	Thermo-Drive	4mm (0.16") I.D. X 5.1mm (0.200") O.D.	1121-0951-P5	
	Thermo-Drive, Flathead	(0.050") x (0.090") I.D. X (0.110") X (0.190") O.D.	1121-0934-P5	1121-0821-P5
	Extended Reach Thermo-Drive	0.78mm (0.030") I.D. X 2.29mm (0.090") O.D.	1121-0935-P5	1121-0628-P5
	Extended Reach Thermo-Drive	1.02mm (0.040") I.D. X 2.54mm (0.10") O.D.	1121-0936-P5	1121-0629-P5
	Extended Reach Thermo-Drive	1.52mm (0.060") I.D. X 3.05mm (0.120") O.D.	1121-0937-P5	1121-0630-P5
	ThermoMax	0.76mm (0.030") I.D. X 1.91mm (0.075") O.D.	1121-0938-P5	1121-0882-P5
	ThermoMax	1.02mm (0.040") I.D. X 2.20mm (0.085") O.D.	1121-0939-P5	1121-0883-P5
	ThermoMax	1.52mm (0.060") I.D. X 2.69mm (0.106") O.D.	1121-0940-P5	1121-0884-P5
	Precision	0.50mm (0.020") I.D. X 1.79mm (0.070") O.D.	1121-0941-P5	1121-0680-P5
	Precision	0.76mm (0.030") I.D. X 2.03mm (0.080") O.D.	1121-0942-P5	1121-0678-P5
	Precision	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0943-P5	1121-0679-P5
	Precision	1.52mm (0.060") I.D. X 2.79mm (0.110") O.D.	1121-0944-P5	1121-0690-P5
	Precision	0.635mm (0.025") I.D. X 1.39mm (0.055") O.D.	1121-0949-P5	
	Precision	0.635mm (0.025") I.D. X 1.14mm (0.045") O.D.	1121-0950-P5	
 	Flo-D-Sodr	1.52mm (0.060") I.D. X 4.78mm (0.188") O.D.	1121-0945-P5	1121-0631-P5
	Flo-D-Sodr, Precision	0.50mm (0.020") I.D. X 1.78mm (0.070") O.D.	1121-0946-P5	1121-0681-P5
	Flo-D-Sodr, Precision	0.76mm (0.030") I.D. X 2.03mm (0.080") O.D.	1121-0947-P5	1121-0682-P5
	Flo-D-Sodr, Precision	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0948-P5	1121-0683-P5

\*SX-90 tips can only be used with SX-90 heaters date code 10-06 or later. \*\*Endura tips can only be in the SX-80 or SX-90.

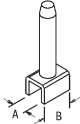
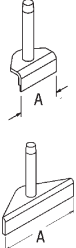
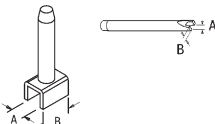
# PS-90 Handpiece

## Optional Items and Replacement Parts

### PS-90 Universal Soldering Iron

DESCRIPTION	PART NUMBERS	
	PS-90 Handpiece IntelliHeat	6010-0150-P1
	PS-90 Handpiece Kit IntelliHeat	6993-0267-P1
	PS-90 SensaTemp Soldering Iron Kit	6993-0199-P1
	PS-90 SensaTemp Soldering Iron	6010-0131-P1
	PS-90N SensaTemp Kit	6993-0275-P1
	PS-90N SensaTemp handpiece	6010-0116-P1
	PS-90N IntelliHeat handpiece	6010-0157-P1
	PS-90N IntelliHeat handpiece kit	6993-0274-P1
	PS-90 Cubby (Available November 2007)	6019-0081-P1
	Lead Free Cubby (Nov 07) with Green insert	6019-0081-G-P1
	Green Replacement handpiece insert for PS-90	1140-0083-G-P1
	<b>Replacement Parts</b>	
PS-90 Heater Assembly (fits PS-80)	6010-0095-P1	
PS-90N Heater Assembly	6010-0117-P1	
PS-90 Heater Retaining Nut	1410-0122-P5	
PS-90 Flared Ring	1500-0074-P5	
PS-90 Flat Ring	1500-0076-P5	
PS-90 Handpiece (IntelliHeat Version) with Green Comfort Grip	6010-0159-P1	
PS-90 Tip & Tool Stand with Green Insert	6019-0074-P1	
Replacement Sponge for new tool stand	4021-0013-P5	
Replacement brass tip cleaner for new tool stand	1129-0018-P1	

## Surface Mount Removal Tips for PS-90

TIP (and application)	DESCRIPTION	TIP SIZE A x B	PART NUMBERS
	SOIC - 8 (JEDEC)	5.05mm x 5.08mm (0.199" x 0.200")	1121-0390-P1
	SOIC - 14 (JEDEC)	5.05mm x 8.99mm (0.199" x 0.354")	1121-0391-P1
	SOIC - 16 (JEDEC)	5.05mm x 10.2mm (0.199" x 0.404")	1121-0392-P1
	SOIC - 28 (EIAJ)	10.6mm x 17.5mm (0.416" x 0.690")	1121-0442-P1
	Flat Blade Tip	A = 7.6mm (0.3")	1121-0512-P1
		A = 10.2mm (0.4")	1121-0514-P1
		A = 12.7mm (0.5")	1121-0473-P1
		A = 17.8mm (0.7")	1121-0416-P1
		A = 20.3mm (0.8")	1121-0497-P1
	A = 25.4mm (1.0")	1121-0448-P1	
	Chip Component	3.56mm x 2.03mm (0.14" x 0.08")	1121-0303-P1
	SOT-23	19.333mm x 8.1mm (0.76" x 0.32")	1121-0403-P1


# PS-90 Single Point Soldering Tips

TIP	DESCRIPTION	SIZE	PART NUMBERS
	1/16" Chisel (High Capacity)	1.60mm (0.063")	1121-0414-P5
	1/64" Conical	0.40mm (0.016")	1121-0357-P5
	1/64" Sharp Bent Conical	0.40mm (0.016")	1121-0830-P5
	1/32" Conical	0.80mm (0.031")	1121-0336-P5
	1/16" Chisel	1.60mm (0.063")	1121-0335-P5
	1/16" Chisel Long Reach	1.60mm (0.063")	1121-0499-P5
	1/8" Chisel	3.20mm (0.125")	1121-0337-P5
	1/32" Chisel	0.80mm (0.031")	1121-0359-P5
	3/32" Chisel	2.40mm (0.094")	1121-0360-P5
	1/16" Chisel, Extended Reach	1.60mm (0.063")	1121-0533-P5
	1/64" Bent Conical	0.40mm (0.016")	1121-0363-P5
	1/64" Bent Conical	0.40mm (0.016")	1121-0828-P5
	1/32" Conical, Extended Reach	0.80mm (0.031")	1121-0527-P5
	3/16" Chisel	4.80mm (0.188")	1121-0358-P5
	1/16" Chisel (MicroFine)	1.60mm (0.063")	1121-0349-P5
	1/16" Chisel, Thermo-Drive	1.60mm (0.063")	1121-0510-P5
	1/32" Bent Chisel	0.80mm (0.031")	1121-0361-P5
	1/8" Chisel, Thermo-Drive	3.20mm (0.125")	1121-0518-P5
	3/32" Chisel, Extended Reach	2.40mm (0.094")	1121-0529-P5
	1/16" Bent Chisel, Long Reach	1.60mm (0.063")	1121-0500-P5
	1/64" Conical Long Reach	0.40mm (0.016")	1121-0528-P5
	Angled Mini-Wave, Fine Pitch	1.80mm (0.07")	1121-0564-P5
	Angled Mini-Wave	2.40mm (0.09")	1121-0610-P5
	Single-Sided Chisel, Fine Pitch	1.50mm (0.06")	1121-0563-P5
	Single-Sided Chisel	3.30mm (0.13")	1121-0406-P5
	Mini-Wave	3.30mm (0.13")	1121-0490-P5
	Flat Blade	6.60mm (0.25")	1121-0402-P1
	Flat Blade	10.2mm (0.40")	1121-0305-P5

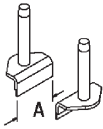
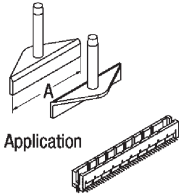


# TT-65 ThermoTweez Handpiece

## TT-65 ThermoTweez/Replacement Parts

DESCRIPTION	PART NUMBERS	
	ThermoTweez SensaTemp Handpiece	7025-0001-P1
	Heater Assembly, with Sensor	6010-0082-P1
	Heater Assembly, without Sensor	6010-0083-P1
	Cushion Grip Kit	6993-0184
	Pads for Cushion Grips	1317-0029-P2
	Plastic Grip (2 ea.)	1119-0123-P1
	Replacement Hinge Kit	6993-0156-P1
	TT-65 Handpiece IntelliHeat	6010-0151-P1
	TT-65 Handpiece Kit IntelliHeat	6993-0268-P1
	TT-65 Cubby (Available November 2007)	6019-0083-P1

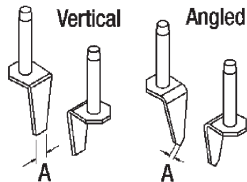

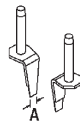


# TT-65 ThermoTweez Handpiece Tips

TIP	DESCRIPTION	TIP SIZE	PART NUMBERS
	Narrow-body connectors, and SOIC Components	A=7.6mm (0.3") A=10.2mm (0.4")	1121-0512-P1 1121-0514-P1
	SOIC, SOJ, SIMMs Component	A=12.7mm (0.5") A=17.8mm (0.7") A=20.3mm (0.8") A=25.4mm (1.0")	1121-0473-P1 1121-0416-P1 1121-0497-P1 1121-0448-P1

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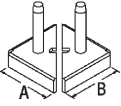


# TT-65 ThermoTweez Handpiece Tips

## SMT Removal Tips

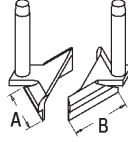
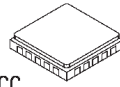
TIP	DESCRIPTION	TIP SIZE	PART NUMBERS
 <p>Vertical      Angled</p> <p>Standard Wall: Thickness = 1.3mm (0.050")</p> <p>Application Chip Component </p>	<p>Chip Component (vertical)</p> <p>Chip Component (vertical)</p> <p>Chip Component (vertical)</p> <p>Chip Component (vertical) Small SOIC</p>	<p>A=0.76mm (0.03")</p> <p>A=2.0mm (0.08")</p> <p>A=4.1mm (0.16")</p> <p>A=6.4mm (0.25")</p>	<p>1121-0398-P1</p> <p>1121-0313-P1</p> <p>1121-0399-P1</p> <p>1121-0401-P1</p>
 <p>Thin-Wall: Thickness = 0.43mm (0.017")</p>	<p>Thin-Walled Chip Component (vertical)</p> <p>Thin-Walled Chip Component (vertical)</p>	<p>A=0.76mm (0.03")</p> <p>A=2.0mm (0.08")</p>	<p>1121-0520-P1</p> <p>1121-0521-P1</p>
 <p>Application Chip Component </p>	<p>1/64" Angled Fine Point Conical Chip Component</p>	<p>A=0.43mm (0.017")</p>	<p>1121-0517-P1</p>

# TT-65 ThermoTweez Handpiece Tips

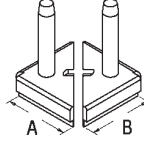
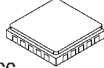
## PLCC/PQFP Removal Tips

TIP	DESCRIPTION	TIP SIZE A x B	PART NUMBERS
 <p>Standard Wall: Thickness = 1.3mm (0.050")</p> <p>Application</p> <p>PLCC</p>  <p>The ThermoTweez can also remove leadless components (LCCCs) if sized correctly.</p> <p>PQFP</p> 	PLCC-20	6.86mm x 6.86mm (0.27" X 0.27")	1121-0316-P1
	PLCC-28	9.4mm x 9.4mm (0.37" x 0.37")	1121-0317-P1
	PLCC-32	12.2mm x 9.65mm (0.48" x 0.38")	1121-0352-P1
	PLCC-44, PQFP-84	14.5mm x 14.5mm (0.57" x 0.57")	1121-0318-P1
	PLCC-52, PQFP-100	17.0mm x 17.0mm (0.67" x 0.67")	1121-0319-P1
	PLCC-68, PQFP-132	21.9mm x 21.9mm (0.86" x 0.86")	1121-0320-P1
	PLCC-84, PQFP-160	26.9mm x 26.9mm (1.06" x 1.06")	1121-0321-P1

## Thin-Walled Surface Mount Removal Tips


TIP	DESCRIPTION	TIP SIZE A x B	PART NUMBERS
 <p>Application</p>  <p>LCCC</p>	Removal Tips for Motorola Pager LCCC Packages and small, Fine-Pitch PQFPs	6.6mm x 6.6mm (0.26" x 0.26") 9.16mm x 8.89mm (0.40" x 0.35")	1121-0417-P1 1121-0425-P1
	Wall thickness = 0.025" (standard height = 0.275")		

## LCCC Removal Tips

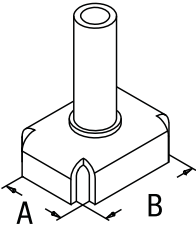
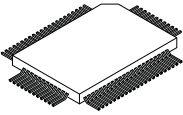
TIP	DESCRIPTION	TIP SIZE A x B	PART NUMBERS
 <p>Application</p>  <p>LCCC</p>	Removal Tips for LCCC Packages and small, Fine-Pitch PQFPs	8.89mm x 6.35mm (0.35" x 0.25") 21.6mm x 21.6mm (0.85" x 0.85")	1121-0452-P1 1121-0455-P1
	Wall thickness = 0.635mm (0.025") (reduced height = 0.2" for high mass boards)		

# TP-65 ThermoPik Handpiece & Tips

## TP-65 ThermoPik/Replacement Parts


HANDPIECE	DESCRIPTION	PART NUMBERS
	TP-65 ThermoPik Handpiece SensaTemp	7024-0001-P1
	Heater Assembly	6010-0081-P1
	Handle Kit	6993-0140-P1
	Hardware Kit	6993-0189-P1
	Gender Bender Adaptor (Allows SensaTemp Handpieces to be used on IntelliHeat power sources)	6993-0278-P1
	SX Tool Stand (Available November 2007)	6019-0082-P1




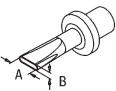
## TP-65 ThermoPik Tips

TIP	DESCRIPTION	TIP SIZE	PART NUMBERS
 <p>Application Flat Pack</p>  <p>Note: The TP-65 ThermoPik requires an SX Tip &amp; Tool Stand.</p>	FlatPack Tip	16.8mm x 22.9mm (0.66" x 0.90")	1121-0322-002-P1
	PQFP-68 Tip (bumper pack)	15.7mm x 15.7mm (0.62" x 0.62")	1121-0323-P1
	PQFP-64/80 (non-bumper)	15.7mm x 15.7mm (0.62" x 0.62")	1121-0484-P1
	PQFP-84 Tip	18.3mm x 18.3mm (0.72" x 0.72")	1121-0324-P1
	PQFP-100 Tip	20.8mm x 20.8mm (0.82" x 0.82")	1121-0325-P1
	PQFP-132 Tip	25.9mm x 25.9mm (1.02" x 1.02")	1121-0326-P1
	PQFP-144	29.2mm x 29.2mm (1.15" x 1.15")	1121-0456-P1
	PQFP-208	30.0mm x 30.0mm (1.18" x 1.18")	1121-0544-P1
	PQFP-160 Tip	31.0mm x 31.0mm (1.22" x 1.22")	1121-0351-P1
	PQFP-196	36.3mm x 36.3mm (1.43" x 1.43")	1121-0483-P1


# TJ-70/85 ThermoJet Handpieces & Tips


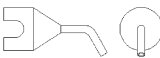

## TJ-70 ThermoJet/Replacement Parts & Handpiece Tips

HANDPIECE	DESCRIPTION	PART NUMBERS
	TJ-70 ThermoJet SensaTemp Handpiece	7023-0002-P1
	Heater assembly	6010-0084-P1
	Handle Kit	6993-0140-P1
	Hardware Kit	6993-0189-P1
	Gender Bender Adaptor (Allows SensaTemp Handpieces to be used on IntelliHeat power sources)	6993-0278-P1
	SX Tool Stand (Available November 2007)	6019-0082-P1

TIP	DESCRIPTION	TIP SIZE A x B	PART NUMBERS
	Small, Straight, Single Jet Tip	0.060" I.D.	1121-0366-P1
	Small, Curved, Single Jet Tip	0.060" I.D.	1121-0338-P1
	SOIC Tip (dual-jet)	A = 4.32mm (0.17")	1121-0330-P1
	Flat End Tip	A = 7.11 mm (0.28") B = 1.88mm (0.074")	1121-0365-P1
		A = 6.10mm (0.24") B = 1.88mm (0.074")	1121-0371-P1

## TJ-85 ThermoJet/Replacement Parts & Handpiece Tips

HANDPIECE	DESCRIPTION	PART NUMBERS
	Heater Retaining Nut	1410-0122-P5
	Flared Ring	1500-0074-P5
	Heater Assembly	6010-0143-P1
	TJ-85 Handpiece IntelliHeat	6010-0153-P1
	TJ-85 Kit IntelliHeat	6993-0270-P1
	TJ-85 Cubby (Available November 2007)	6019-0081-P1
	TJ-85 Handpiece SensaTemp	6010-0142-P1
	TJ-85 Handpiece Kit SensaTemp	6993-0247-P1

TIP	DESCRIPTION	TIP SIZE A x B	PART NUMBERS
	Straight Nozzle	0.06" Inner Diameter	1259-0129-P1
	Curved Nozzle	0.06" Inner Diameter, Bent 60 Degrees	1259-0130-P1
	Flat Nozzle	0.24" X 0.074" Inner flow Dimensions	1259-0131-P1

# PACE Tip Kits

Many customers would like to try a variety of different tip shapes and sizes. PACE Tip Kits provide a variety of popular tip shapes and sizes.

## PS-80/90 Soldering Iron Tip Kit

DESCRIPTION	TYPE/SIZE	PART NUMBERS
<b>Chisel Tip Kit</b> Includes one of each of the following tips:	1/16" Chisel	<b>6993-0210</b> 1121-0414
	1/8" Chisel	1121-0337
	3/32" Chisel	1121-0360
	1/32" Bent Chisel	1121-0361
	1/16" Thermo-Drive Chisel	1121-0510
	3/16" Chisel	1121-0358
	Extended Reach Single Sided Chisel	1121-0532
	1/8" Thermo-Drive Chisel	1121-0518

## SX-90 Desoldering Tip Kit

DESCRIPTION	TYPE/SIZE	PART NUMBERS
<b>SX-90 Tip Kit</b> Includes one of each of the following tips:	Thermo-Drive (0.030"ID)	<b>6993-0288-P1</b> 1121-0930
	Thermo-Drive (0.040"ID)	1121-0931
	Thermo-Drive (0.00"ID)	1121-0932
	Thermo-Drive (0.090"ID)	1121-0933
	Precision (0.020"ID)	1121-0941
	Precision (0.030"ID)	1121-0942
	Precision (0.040"ID)	1121-0943
	Flo-D-Sodr (0.060"ID)	1121-0945

# Tip Heater Cartridge Handpiece

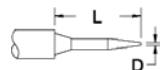
## Optional Items and Replacement Parts

### TD-100/Replacement Parts

HANDPIECE	DESCRIPTION	PART NUMBERS
	TD-100 Handpiece	6010-0132-P1
	TD-100 Tip & Tool Stand Kit (Includes TD-100 and Stand)	6993-0242-P1
	TD-100 Handpiece IntelliHeat	6010-0147-P1
	TD-100 Handpiece Kit IntelliHeat	6993-0263-P1
	Replacement O-rings	1213-0090-P5
	Replacement Cord Assembly for TD-100 Handpiece HeatWise/TempWise	3008-0131-P1
	Replacement Cord Assembly for TD-100 Handpiece IntelliHeat	3008-0296-P1
	Cleaning Sponge, Tip & Tool Stands (SX, PS, SP)	4021-0008-P3
	Soft Grip & Cubby Kit	6993-0241-P1
	Replacement Soft Grips	1119-0161-P5
	TD-100 Tip & Tool Stand (Available November 2007)	6019-0079-P1
	Lead Free Cubby (Nov 07) with Green insert	6019-0079-G-P1
	Replacement Sponge for new tool stand	4021-0013-P5
	Replacement brass tip cleaner for new tool stand	1129-0018-P1
	Tip Case – Holds 10 Tips (Tips not included)	1310-0034-P1
	Green Comfort Grip & Green Handpiece Insert for TD-100 Tip & Tool Stand	6993-0283-P1
	Replacement Green Comfort Grips for TD-100, pack of 5	1119-0176-P5
	Green replacement handpiece insert for TD-100 (Before Nov 2007)	1140-0075-G-P1
	Green replacement handpiece insert for TD-100	1140-0081-G-P1
	Lead Free Cubbies, inserts and Bushing part numbers:	
	Instant SetBack Tip & Tool Stand for TD-100 with Standard Insert	6019-0077-P1
	Instant SetBack Tip & Tool Stand for TD-100 with Green Insert	6019-0078-P1
	Fuse, 115V ST 25, 30, 50, 65, 75, 115	1159-0246-P5
	Fuse, 230V ST 25E, 30E, 50E, 65E, 75E, 115E	1159-0213-P5
	Fuse, 115V ST 100	1159-0275-01-P5
	Fuse, 230V ST 100E	1159-0275-02-P5

# TD-100 Standard Soldering Tips

## Tip Specifications

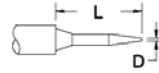


TIP	DESCRIPTION	TIP SIZE - L	SIZE - D	PART NUMBERS
	1/32" Conical Sharp Extended	13.4mm (0.530")	0.80mm (0.031")	1124-0001-P1
	1/64" Conical Sharp	7.8mm (0.310")	0.40mm (0.016")	1124-0002-P1
	1/64" Conical Sharp Bent 30 Degrees	7.8mm (0.310")	0.40mm (0.016")	1124-0003-P1
	1/64" Conical Sharp Extended	13.5mm (0.535")	0.40mm (0.016")	1124-0004-P1
	13/64" Conical Sharp Extended	4.7mm (0.188")	0.80mm (0.031")	1124-0005-P1
	3/128" Conical	4.6mm (0.184")	0.58mm (0.023")	1124-0006-P1
	1/16" 90 Degree Chisel	10.9mm (0.430")	2.03mm (0.080")	1124-0007-P1
	3/64" 30 Degree Chisel	9.7mm (0.380")	1.20mm (0.047")	1124-0008-P1
	3/64" 30 Degree Bevel	3.6mm (0.140")	1.20mm (0.047")	1124-0009-P1
	13/64" Extra Large Chisel	7.62mm (0.300")	5.15mm (0.203")	1124-0010-P1
	1/64" 60 Degree Bevel	14.7mm (0.580")	0.40mm (0.016")	1124-0011-P1
	1/32" 30 Degree Chisel	9.1mm (0.360")	0.80mm (0.031")	1124-0012-P1
	3/32" 30 Degree Chisel	9.9mm (0.390")	2.40mm (0.094")	1124-0013-P1
	5/64" 60 Degree Chisel	4.7mm (0.185")	2.00mm (0.078")	1124-0014-P1
	1/64" Conical, Sharp, Bent 30 Degrees, Extended	15.1mm (0.595")	0.40mm (0.016")	1124-0015-P1
	3/64" Chisel Bent 30 Degrees	11.7mm (0.460")	1.20mm (0.047")	1124-0016-P1
	1/16" 60 Degree Chisel	15.8mm (0.620")	1.60mm (0.063")	1124-0017-P1
	1/32" Conical Sharp Extended	16.7mm (0.660")	0.80mm (0.031")	1124-0018-P1
	1/16" 30 Degree Chisel	9.9mm (0.390")	1.60mm (0.063")	1124-0019-P1
	1/8" 90 Degree Chisel	4.8mm (0.190")	3.20mm (0.125")	1124-0020-P1
	3/128" Conical Sharp Bent 30 Degrees	14.4mm (0.570")	0.58mm (0.023")	1124-0021-P1
	1/16" Conical Sharp	9.9mm (0.390")	1.60mm (0.063")	1124-0022-P1
	1/8" 90 Degree Chisel Extended	8.6mm (0.340")	3.20mm (0.125")	1124-0023-P1
	1/16" 30 Degree Bevel	9.9mm (0.390")	1.60mm (0.063")	1124-0024-P1
	1/16" Conical Sharp Extended	12.1mm (0.478")	1.60mm (0.063")	1124-0025-P1
	1/16" Chisel Bent 30 Degrees	9.7mm (0.385")	1.60mm (0.063")	1124-0026-P1
	3/128" Conical Sharp	15.2mm (0.600")	0.58mm (0.023")	1124-0027-P1
	3/64" Chisel, Bent 30 Degrees, Extended	15.2mm (0.600")	0.91mm (0.36")	1124-0028-P1
	1/32" 30 Degree Bevel	9.1mm (0.360")	1.91mm (0.75")	1124-0029-P1
	1/32" Conical Sharp	9.9mm (0.390")	0.80mm (0.031")	1124-0030-P1



# TD-100 Standard Soldering Tips

## Tip Specifications

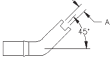






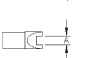

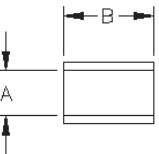
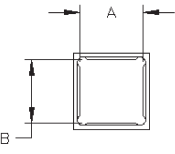
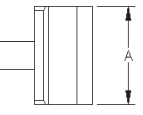


TIP	DESCRIPTION	TIP SIZE - L	SIZE - D	PART NUMBERS
	Heat Staking	N/A	4.04mm (0.159")	1124-0031-P1
	MiniWave	N/A	3.05mm (.120")	1124-0032-P1
	Angled MiniWave	N/A	3.05mm (.120")	1124-0033-P1
	Single Sided Chisel	N/A	3.05mm (.120")	1124-0034-P1
	Angled MiniWave	N/A	2.11mm (.083")	1124-0035-P1
	1/128" Conical	N/A	0.20mm (0.008")	1124-0036-P1
	1/4 Flat Blade	N/A	4.57mm (0.180")	1124-0037-P1
	Single Sided Chisel, Fine Pitch	N/A	1.5mm (.06")	1124-0038-P1
	Angled MiniWave, Fine Pitch	N/A	1.6mm (.064")	1124-0039-P1
	MicroFine Single Sided Chisel	N/A	0.9mm (.035")	1124-0040-P1
	MicroFine Single Sided Chisel	N/A	1.1mm (.045")	1124-0041-P1
	MicroFine Conical	N/A	0.25mm (.01")	1124-0042-P1
	MicroFine Bent Conical	N/A	0.76mm (.03")	1124-0043-P1
	MicroFine Bent Conical	N/A	0.5mm (.02")	1124-0044-P1
	Angled Micro-Wave	N/A	1.1mm (.045")	1124-0045-P1
	Micro-Wave	N/A	1.1mm (.045")	1124-0046-P1
	Angled Chisel	8.4mm (0.33")	1.33mm (0.051")	1124-0047-P1
	Single Sided Chisel	17.00mm (0.693")	4.55mm (0.178")	1124-0048-P1
	1/16" Chisel Tip with K type Thermo-couple welded to tip			7021-0008-P1



















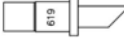





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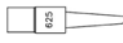




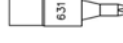



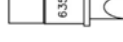
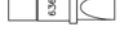


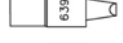
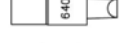


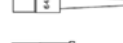
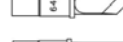
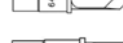



# TD-100 Surface Mount Removal Tips

## Tip Specifications

TIP	COMPONENT TYPE	DIMENSION A	DIMENSION B	PART NUMBERS
	Chip 402 Angle	2.2mm (.085")		1124-0518-P1
	Chip 1808	5mm (.195")		1124-0520-P1
	Chip 402	1mm (.04")		1124-0521-P1
	SOT 23	1.8mm (.07")		1124-0522-P1
	SOT 89	2.8mm (.11")		1124-0523-P1
	Chip 1206	3.6mm (.142")		1124-0524-P1
	Chip 0805	2.4mm (.095")		1124-0525-P1
	Chip 0201	1.22mm (.048")		1124-0533-P1
	Chip 0201	1.22mm (.048")		1124-0534-P1
	SOIC 14/16 SOIC 20 SOP 28 SOP 40 SOP 44 TSOP 56 TSOP 28 SOIC 8 TSOP 40	5.2mm (.205") 9.6mm (.377") 10.8mm (.426") 11.9mm (.467") 13.1mm (.516") 18.8mm (.739") 12mm (.471") 5.1mm (.202") 18.8mm (.74")	10.5mm (.415") 13.6mm (.535") 18.6mm (.734") 25.7mm (1.01") 28.4mm (1.12") 14.1mm (.557") 8.5mm (.333") 4.65mm (.183") 10.4mm (.410")	1124-0504-P1 1124-0505-P1 1124-0506-P1 1124-0507-P1 1124-0508-P1 1124-0509-P1 1124-0510-P1 1124-0519-P1 1124-0526-P1
	PLCC 28 Socket PLCC 32 PLCC 44 QFP 144 PLCC 28 QFP 100/128 PLCC 20 PLCC 18 TQFP 80 PLCC 52 QFP 80/100	9.3mm (.365") 14.2mm (.561") 16.8mm (.662") 20.6mm (.81") 11.8mm (.465") 22mm (.865") 9.3mm (.365") 7.6mm (.3") 12.5mm (.491") 19.4mm (.762") 26.6mm (1.05")	9.3mm (.365") 11.7mm (.459") 16.8mm (.662") 20.6mm (.810") 11.8mm (.465") 16mm (.628") 9.3mm (.365") 12.8mm (.505") 12.5mm (.491") 19.4mm (.762") 26.6mm (1.05")	1124-0511-P1 1124-0512-P1 1124-0513-P1 1124-0514-P1 1124-0515-P1 1124-0516-P1 1124-0527-P1 1124-0528-P1 1124-0529-P1 1124-0530-P1 1124-0531-P1
	Blade Blade Blade Blade Blade	10.8mm (.425") 16mm (.630") 21.2mm (.835") 25mm (.984") 6.7mm (.263")		1124-0501-P1 1124-0502-P1 1124-0503-P1 1124-0532-P1 1124-0536-P1

# TD-100 Diamond Series Extended Life Soldering Tips

PROFILE	DESCRIPTION	PART NUMBERS
	.016 Conical	1126-0601-P1
	.039 Conical	1126-0602-P1
	.055 Conical, Blunt	1126-0603-P1
	.031 Conical, Blunt	1126-0604-P1
	.016 Conical, Long	1126-0605-P1
	.016 Conical	1126-0606-P1
	.016 Conical, Extended	1126-0607-P1
	.024 Conical	1126-0608-P1
	.039 Conical	1126-0609-P1
	.031 Conical	1126-0610-P1
	.047 Conical	1126-0611-P1
	.016 Conical Bent	1126-0612-P1
	.016 Conical, Blunt, Bent	1126-0613-P1
	.016 Conical, Blunt	1126-0614-P1
	.016 Conical Extended, Bent	1126-0615-P1
	.157 Bevel, 45 Degree	1126-0616-P1
	.078 Bevel, 60 Degree	1126-0617-P1
	.118 Bevel, 60 Degree	1126-0618-P1
	.157 Bevel, 45 Degree Tinned on edge/face	1126-0619-P1
	.039 Bevel, 60 Degree, Extended	1126-0620-P1
	.039 Bevel, 45 Degree Tinned on edge / face	1126-0621-P1
	.078 Bevel, 45 Degree Tinned on edge / face	1126-0622-P1
	.118 Bevel, 45 Degree Tinned on edge / face	1126-0623-P1
	.039 Bevel, 45 Degree	1126-0624-P1

PROFILE	DESCRIPTION	PART NUMBERS
	.06 Wide, Bevel 60 Degrees, .12x.06 Oval Face	1126-0625-P1
	.07 Bevel, 60 Degree	1126-0626-P1
	.078 Bevel, 45 Degree	1126-0627-P1
	.13 Bevel, 60 Degree	1126-0628-P1
	.118 Bevel, 45 Degree	1126-0629-P1
	.023 Bevel, Special	1126-0630-P1
	.031 Chisel Standard	1126-0631-P1
	.047 Chisel Standard	1126-0632-P1
	.062 Chisel Standard	1126-0633-P1
	.094 Chisel Standard	1126-0634-P1
	.157 Chisel Standard	1126-0635-P1
	.205 Chisel Standard	1126-0636-P1
	.157 Chisel Long Reach	1126-0637-P1
	.205 Chisel Long Reach	1126-0638-P1
	.078 Chisel Blunt	1126-0639-P1
	.125 Chisel Blunt	1126-0640-P1
	.055 Chisel, Bent 30 Degrees	1126-0641-P1
	.062 Chisel, Bent 30 Degrees	1126-0642-P1
	.055 Chisel, Bent, Extended	1126-0643-P1
	.185 Knife, 45 Degree	1126-0644-P1
	.181 Knife, 45 Degree	1126-0645-P1
	.185 Knife, 45 Degree, Blunt	1126-0646-P1
	.118 Knife, 45 Degree	1126-0647-P1
	Single Sided Chisel .08 Wide	1126-0648-P1

\*Drawings are representative of tips actual shape. Actual tips may differ somewhat, other than front end geometry.

# MT-100 & TP-100 Handpiece & Tips

## MT-100/TP-100

HANDPIECE	DESCRIPTION	PART NUMBERS
	MT-100 HeatWise/TempWise Handpiece	6010-0140-P1
	MT-100 HeatWise/TempWiseTip & Tool Stand Kit (Includes MT-100 and Stand)	6993-0243-P1
	MT-100 Handpiece IntelliHeat	6010-0148-P1
	MT-100 Handpiece Kit IntelliHeat	6993-0264-P1
	TP-100 Handpiece IntelliHeat	6010-0158-P1
	TP-100 Handpiece Kit IntelliHeat	6993-0280-P1
	Cleaning Sponge, Tip & Tool Stands (SX, PS, SP)	4021-0008-P3
	MT-100 & TP-100 Tip & Tool Stand (Available November 07)	6019-0080-P1
	Soft Grip	1119-0165-P2
	Green Comfort grip & green Handpiece Insert for MT-100 Tip & Tool Stand	6993-0284-P1
	Replacement Green Comfort Grips for MT-100, pack of 5	1119-0177-P2
	Green replacement handpiece insert for	
	MT-100/TP-100 Green, Lead Free Handpiece Insert (Before Nov 07)	1257-0323-G-P1
	MT-100/TP-100 Green, Lead Free Handpiece Cubby (After 11-07)	6019-0080-G-P1
MT-100/TP-100 Green, Lead Free Handpiece Insert (After 11-07)	1257-0383-G-P1	

## MT-100 Surface Mount Removal Tips

TIP	COMPONENT TYPE	DIMENSION A	DIMENSION B	PART NUMBERS
	Chip (fig.A)	0.2mm (.008")	0.2mm (.008")	1124-1001-P1
	Chip, SOT (fig.B)	0.7mm (.03")	0.5mm (.02")	1124-1002-P1
	Chip, SOT (fig.B)	0.7mm (.03")	1mm (.04")	1124-1003-P1
	Chip, SOT (fig.B)	0.7mm (.03")	2mm (.08")	1124-1004-P1
	SOIC, SOT, TSOPS (fig.C)	0.7 mm (.03")	6mm (.24")	1124-1005-P1
	SOIC, SOT, TSOPS (fig.C)	0.7mm (.03")	8mm (.31")	1124-1006-P1
	SOIC, SOT, TSOPS (fig.C)	0.7mm (.03")	10mm (.39")	1124-1007-P1
	SOIC, SOT, TSOPS (fig.C)	0.7mm (.03")	13mm (.51")	1124-1008-P1
	SOIC, SOT, TSOPS (fig.C)	0.7mm (.03")	18mm (.74")	1124-1009-P1
	SOIC, SOT, TSOPS (fig.C)	0.7mm (.03")	28mm (1.09")	1124-1010-P1

## TP-100 Surface Mount Removal Tips


TIP	TYPE	LEAD COUNT	SIZE-A	SIZE-B	HEIGHT	FOOTPRINT	PART NUMBERS
	LQFP/TQFP	80	12mm (.472")	12mm (.472")	1.4mm	2.0mm	1124-2001-P1
	LQFP/TQFP	64, 80, 100, 120, 128, 168	14mm (.551")	14mm (.551")	1.4mm	2.0mm	1124-2002-P1
	LQFP/TQFP	128, 144, 160, 176	20mm (.788")	20mm (.788")	1.4mm	2.0mm	1124-2003-P1
	LQFP/TQFP	176, 216	24mm (.945")	24mm (.945")	1.4mm	2.0mm	1124-2004-P1
	LQFP/TQFP	208, 256	28mm (1.10")	28mm (1.10")	1.4mm	2.0mm	1124-2005-P1
	QFP	52, 64, 80, 100	14mm (.551")	14mm (.551")	2.7mm	3.2mm	1124-2006-P1
	QFP	52, 64, 80, 100	14mm (.551")	14mm (.551")	2.7mm	3.9mm	1124-2007-P1
	QFP	64, 80, 100, 128	14mm (.551")	20mm (.788")	2.7mm	3.2mm	1124-2008-P1
	QFP	64, 80, 100, 128	14mm (.551")	20mm (.788")	2.7mm	3.9mm	1124-2009-P1
	QFP	120, 128, 144, 160, 208	28mm (1.10")	28mm (1.10")	3.4mm	2.6/3.2mm	1124-2010-P1
	QFP	160	28mm (1.10")	28mm (1.10")	3.4mm	3.9mm	1124-2011-P1

# SMR Handpieces


## Optional Items and Replacement Parts



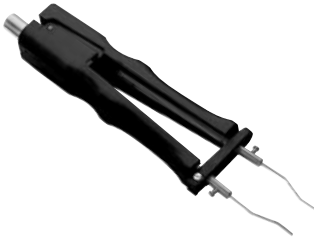
### LF-15 LapFlo Pulse Heat Handpiece/Replacement Parts

HANDPIECE	DESCRIPTION	PART NUMBERS
	TLF-15 LapFlo Pulse Heat Handpiece (Static Dissipative)	7013-0004-02-P1
	LF-1 Single-Point SMD Soldering Tip (LapFlo)	6000-0008
	ThermoPart Coating Removal Tip	6000-0009
	LF-2 Multi-point SMD Soldering Tip (0.270")	1121-0298-P1
	LF-3 Multi-point SMD Soldering Tip (0.540")	1121-0299-P1
	LF-4 Multi-point SMD Soldering Tip (0.440")	1121-0300-P1
	Universal Power Cord	7000-0023

### CT-15 ConducTweez Pulse Heat Handpiece /Replacement Parts

HANDPIECE	DESCRIPTION	PART NUMBERS
	CT-15 ConducTweez Pulse Heat Handpiece (Static Dissipative)	7020-0001-P1
	CT-1 Chip Component Tip	1121-0286-P1
	Guide Block Kit	6993-0105-P1
	CT-2 14, 16 lead SOIC Tip	1121-0271-P1
	CT-3 20 lead SOIC Tip	1121-0270-P1
	CT-4 24, 28 lead SOIC Tip	1121-0293-P1
	CT-5 SOT Tip	1121-0269-P1
	CT-6 Rounded End Auxiliary Heating Tip	1121-0004-P2
	Universal Power Cord	7000-0023
Tip Mounting Screw	1405-0182-P5	

### TW-15 ResistTweez Pulse Heat Handpiece/Replacement Parts


HANDPIECE	DESCRIPTION	PART NUMBERS
	TW-15 ResistTweez Pulse Heat Handpiece (Static Dissipative)	7009-0005-P1
	Guide Block Kit	6993-0105-P1
	RT-1 18 Pin PLCC ThermoBond Tip	1121-0294-P1
	RT-2 20 Pin PLCC ThermoBond Tip	1121-0295-P1
	RT-3 28 Pin PLCC ThermoBond Tip	1121-0296-P1
	RT-4 44 Pin PLCC ThermoBond Tip	1121-0297-P1
	RT-5 Tapered Flat End Resistance Tips	1121-0301-P1
	RT-7 Flat End Resistance Tips	1121-0006-P2
	Universal Power Cord	7000-0023
Tip Mounting Screw	1405-0182-P5	

### TS-15 StripTweez Pulse Heat Handpiece/Replacement Parts


















HANDPIECE	DESCRIPTION	PART NUMBERS
	TS-15 StripTweez Pulse Heat Handpiece (Static Dissipative)	7012-0002-P1
	Thermal Stripper Tips	1121-0003-P2
	Universal Power Cord	7000-0023
	Guide Block Kit	6993-0105-P1
	Tip Mounting Screw	1405-0106-P5

# Handpieces


## MicroChine Miniature Machining Handpiece/Replacement Parts

HANDPIECE	DESCRIPTION	PART NUMBERS
	MC-65 MicroChine Handpiece	7026-0001-P1
	<b>Optional Items and Replacement Parts:</b>	
	Deluxe Tool Kit (optional)	6005-0013-P1
	Probe Brake Patch Cord (PRC 2000 Systems Only)	1332-0159
	Collet Nut	4005-0012
	Collet 2.39mm (0.094") diameter - Standard Collet	4005-0014

## MicroChine Miniature Machining Handpiece/Replacement Parts

ITEM	DESCRIPTION	PART NUMBERS	
2	Mandrel with Screw Top	1115-0001-P10	
4	Drill, 0.79mm (1/32")	1112-0031-P10	
4	Drill, 1.19mm (3/64")	1112-0032-P10	
4	Drill, 1.59mm (1/16")	1112-0033-P10	
4	Drill, 1.98mm (5/64")	1112-0034-P10	
4	Drill, 2.39mm (3/32")	1112-0035-P10	
5	Ball Mill, 0.40mm (1/64")	1112-0001-P10	
5	Ball Mill, 0.78mm (0.03")	1112-0010-P10	
5	Ball Mill, 0.79mm (1/32")	1112-0002-P10	
5	Ball Mill, 1.19mm (3/64")	1112-0003-P10	
5	Ball Mill, 1.59mm (1/16")	1112-0004-P10	
5	Ball Mill, 2.38mm (3/32")	1112-0005-P10	
5	Ball Mill, 3.18mm (1/8")	1112-0006-P10	
5	Ball Mill, 3.97mm (5/32")	1112-0007-P10	
5	Ball Mill, 4.75mm (3/16")	1112-0008-P10	
5	Ball Mill, 6.35mm (1/4")	1112-0009-P10	
6	Saw, 2.38mm (3/32"), Mounted	1112-0061-P10	
8	Abrasive Wheel 7/8 Red	1129-0001-P10	

## Pik-Vac Handpiece/Replacement Parts

HANDPIECE	DESCRIPTION	PART NUMBERS
	PV-65 Pik-Vac Vacuum Wand u/c	7027-0001-P1
	HP-65 HandiPik (self-contained component handling wand)	7028-0001-P1
	Kit, 1 Small Vacuum Cup, 1 Medium Vacuum Cup, 1 Large Vacuum Cup and 3 Vacuum Needles	6993-0154-P1


# Support Products




## ST 400 and ST 450 & Replacement Parts

DESCRIPTION	PART NUMBERS
Power Cord, 115V	1332-0094-P1
Power Cord, 230V	1332-0093-P1
Fuse, 7 Amp, 125V, Time Lag	1159-0274-P5
Fuse, 3.15 Amp, 250V, Time Lag	1159-0221-P5
Fuse, 1.25 Amp, 250V, Time Lag	1159-0251-P5
Fuse, 0.63 Amp, 250V, Time Lag	1159-0252-P5
PCB ST 400 / 400E	6020-0193-P1
PCB ST 450 / 450E	6020-0198-P1
ST 400 Replacement Heater (Domestic)	3018-0128-P1
ST 400 Replacement Heater (Export)	3018-0129-P1
ST 450 Replacement Heater (Domestic)	6000-0291-P1
ST 450 Replacement Heater (Export)	6000-0292-P1
ST 450 Focus Nozzle 1.5" Square	4058-0001-P1
ST 450 Focus Nozzle 3.0" Square	4058-0002-P1
ST 450 Focus Nozzle 4.5" Square	4058-0003-P1

## PM 200 Process Monitor

DESCRIPTION	PART NUMBERS
	PM 200 Process Monitor (Dual Voltage) Replacement sensor pack of 10
	8007-0464-P1 1285-0046-P1

## Tip Temperature Monitor

DESCRIPTION	PART NUMBERS
	Tip Temperature Monitor (switches from °C to °F) Replacement Sensors (10 included per pack)
	8001-0087-P1 1285-0046-P1

# Support Products

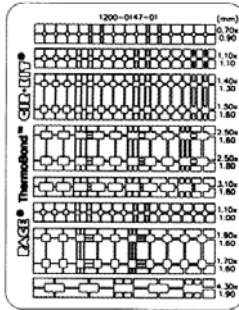
## ThermoBond Cir-Kits

DESCRIPTION	PART NUMBERS
<p>ThermoBond Cir-Kit, Surface Mount Version</p> <p>Complete Consisting of:</p> <ul style="list-style-type: none"> <li>ThermoBond Frames (solder plated on one side):</li> <li>Chip Resistor/Capacitor</li> <li>Inductors, MELFs, Tantalum Capacitors</li> <li>SOTs</li> <li>SOICs, TSOPs</li> <li>PLCCs, LCCCs, SOJs, Ceramic QFPs, Basic Cir-Kit Material and Dry Film Adhesive for Custom Shaping/Cutting</li> <li>PQFPs</li> </ul> <p>Other Accessories:</p> <ul style="list-style-type: none"> <li>Abrasive Stick, 1 piece</li> <li>Kapton Tape, 12.7mm (0.5") x 76.2mm (3.0"), 10 pieces</li> <li>Provis Kit (for cutting and scraping)</li> <li>ThermoBond Tips</li> </ul>	<p><b>6993-0176</b></p> <p>ThermoBond Cir-Kit Frames pictured on page 37</p> <ul style="list-style-type: none"> <li>1200-0147-01-P1</li> <li>1200-0148-01-P1</li> <li>1200-0149-01-P1</li> <li>1200-0150-01-P1</li> <li>1200-0151-01-P1</li> <li>1200-0152-01-P1</li> </ul> <p>See spare parts on page 39</p> <p>See spare parts on page 39</p> <p>7016-0003-P1</p> <p>ThermoBond Tips Part Numbers on page 38</p>
<p>ThermoBond Cir-Kit, Thru-Hole Version</p> <p>Complete Consisting of:</p> <ul style="list-style-type: none"> <li>ThermoBond Frames (solder plated on one side):</li> <li>Straight Run</li> <li>Fine Traces</li> <li>Variety Frame</li> <li>Track Pad</li> <li>DIP Pad</li> <li>Lap/Trace Frames (solder plated on both sides):</li> <li>Straight Run</li> <li>Fine Traces</li> </ul> <p>Other Accessories:</p> <ul style="list-style-type: none"> <li>Eyelets and Funnelets (#'s 4, 5, 6, 8, 10, 21)</li> <li>Abrasive Stick, 1 piece</li> <li>Kapton Tape, 12.7mm (0.5") x 76.2mm (3.0"), 10 pieces</li> <li>Upper Setting Tool</li> <li>Setting Tool Guide</li> <li>Lower Setting Tool, Funnelet</li> <li>Support Tool Base</li> <li>Provis Kit (for cutting and scraping)</li> <li>ThermoBond Tips</li> </ul>	<p><b>6993-0179</b></p> <p>ThermoBond Cir-Kit Frames pictured on page 37</p> <ul style="list-style-type: none"> <li>1200-0158-01-P1</li> <li>1200-0159-01-P1</li> <li>1200-0160-01-P1</li> <li>1200-0161-01-P1</li> <li>1200-0163-01-P1</li> </ul> <p>ThermoBond Cir-Kit Frames pictured on page 37</p> <ul style="list-style-type: none"> <li>1200-0164-03-P1</li> <li>1200-0165-03-P1</li> </ul> <p>Eyelets and Funnelets Part Numbers on page 40</p> <p>See spare parts on page 39</p> <p>See spare parts on page 39</p> <ul style="list-style-type: none"> <li>6000-0051</li> <li>6000-0054</li> <li>1132-0017-P1</li> <li>1321-0054</li> <li>7016-0003-P1</li> </ul> <p>ThermoBond Tips Part Numbers on page 38</p>



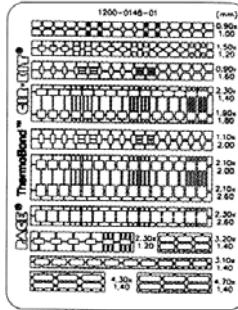
# Support Products

## ThermoBond Cir-Kits



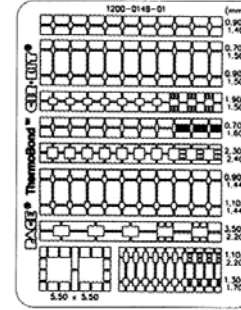
ROW	# OF PARTS	NOM. SIZE (mm)	SIZE ± .001 (IN)
1	15	0.7 x 0.9	.028 x .035
2	15	1.10 x 1.10	.043 x .043
3	15	1.40 x 1.30	.055 x .051
4	15	1.50 x 1.60	.059 x .063
5	10	2.50 x 1.60	.098 x .063
6	10	2.50 x 1.80	.098 x .071
7	10	3.10 x 1.80	.122 x .071
8	15	1.10 x 1.00	.043 x .039
9	10	1.90 x 1.60	.075 x .063
10	10	1.70 x 1.60	.067 x .075
11	5	4.30 x 1.90	.169 x .075

1200-0147-01-P1  
Chip Resistor / Capacitor



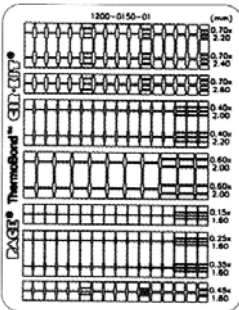
ROW	# OF PARTS	NOM. SIZE (mm)	SIZE ± .001 (IN)
1	15	0.9 x 1.0	.035 x .039
2	15	1.50 x 1.20	.059 x .047
3	15	0.9 x 1.60	.035 x .063
4	15	2.30 x 1.40	.091 x .055
5	15	1.90 x 1.80	.075 x .071
6	15	1.10 x 2.00	.043 x .079
7	15	2.10 x 2.00	.083 x .079
8	15	2.10 x 2.60	.083 x .102
9	15	2.30 x 2.60	.091 x .102
10	6	2.30 x 1.20	.091 x .047
10	6	3.20 x 1.40	.126 x .055
11	10	3.10 x 1.40	.122 x .055
12	6	4.30 x 1.40	.169 x .055
12	6	4.70 x 1.40	.185 x .055

1200-0148-01-P1  
Inductors, MELFS, Tantalum Capacitors



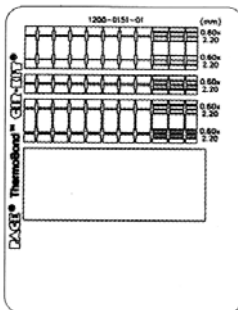
ROW	# OF PARTS	NOM. SIZE (mm)	SIZE ± .001 (IN)
1	10	0.9 x 1.40	.035 x .055
2	10	0.7 x 1.50	.028 x .059
3	10	0.9 x 1.50	.035 x .059
4	10	1.90 x 1.50	.075 x .059
5	10	0.7 x 1.60	.028 x .063
6	10	2.30 x 2.40	.091 x .094
7	10	0.9 x 1.44	.035 x .057
8	10	1.10 x 1.44	.043 x .057
9	5	3.50 x 2.20	.138 x .087
10	2	5.50 x 5.50	.217 x .217
11	10	1.10 x 2.20	.043 x .087
12	10	1.30 x 1.70	.051 x .067

1200-0149-01-P1  
SOTs



ROW	# OF PARTS	NOM. SIZE (mm)	SIZE ± .001 (IN)
1	15	0.7 x 2.20	.028 x .087
2	15	0.7 x 2.40	.028 x .094
3	15	0.7 x 2.60	.028 x .102
4	15	0.4 x 2.00	.016 x .079
5	15	0.4 x 2.20	.016 x .087
6	10	0.6 x 2.00	.027 x .079
7	10	0.6 x 2.00	.024 x .079
8	15	0.15 x 1.60	.006 x .063
9	15	0.25 x 1.60	.010 x .063
10	15	0.35 x 1.60	.014 x .063
11	15	0.45 x 1.60	.018 x .063

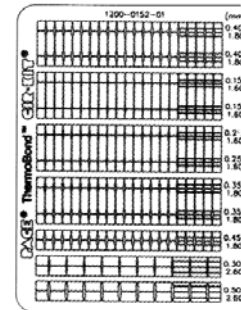
1200-0150-01-P1  
SOICs, TSOPs



ROW	# OF PARTS	NOM. SIZE (mm)	SIZE ± .001 (IN)
1	10	0.6 x 2.20	.024 x .087
2	10	0.6 x 2.20	.024 x .087
3	10	0.6 x 2.20	.024 x .087
4	10	0.6 x 2.20	.024 x .087
5	10	0.6 x 2.20	.024 x .087
6	1	42.0 x 16.3	1.65 x .642
7	1	42.0 x 16.3	1.65 x .642

Row 6 is just adhesive only

1200-0151-01-P1  
PLCCs, LCCCc, Ceramic QFPs

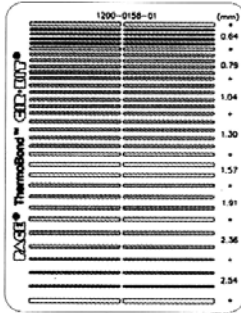


ROW	# OF PARTS	NOM. SIZE (mm)	SIZE ± .001 (IN)
1	20	0.4 x 1.80	.016 x .071
2	20	0.4 x 1.80	.016 x .071
3	20	0.15 x 1.60	.006 x .063
4	20	0.15 x 1.60	.006 x .063
5	20	0.25 x 1.60	.010 x .063
6	20	0.25 x 1.60	.010 x .063
7	20	0.35 x 1.80	.014 x .071
8	20	0.35 x 1.80	.014 x .071
9	20	0.45 x 1.80	.018 x .071
10	10	0.30 x 2.60	.012 x .102
11	10	0.50 x 2.60	.020 x .102

1200-0152-01-P1  
PQFPs

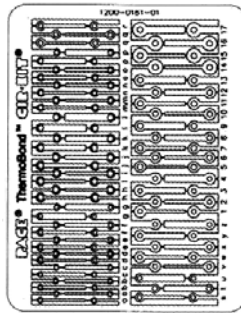
# Support Products

## ThermoBond Cir-Kits



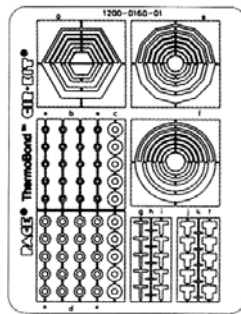
ROW	# OF TRACES	TRACE WIDTH NOM. (mm)	TRACE WIDTH ± .001 (IN)
1	5	0.64	0.025
2	5	0.79	0.031
3	5	1.04	0.041
4	5	1.3	0.051
5	3	1.57	0.062
6	3	1.91	0.075
7	3	2.36	0.093
8	3	2.54	0.1

1200-0158-01-P1  
Straight Run



1200-0161-01-P1  
Fine Traces

SEC.	# OF TRACES & PADS	TRACK WIDTH ± .001 (IN)	TRACK WIDTH (mm) NOM.	PAD SIZE I.D. ± .001 (IN)	PAD SIZE I.D. (mm) NOM.	PAD SIZE O.D. ± .001 (IN)	PAD SIZE O.D. (mm) NOM.
A	4	0.02	0.51	0.033	0.084	0.05	1.27
B	4	0.025	0.64	0.033	0.084	0.05	1.27
C	4	0.031	0.79	0.033	0.084	0.05	1.27
D	4	0.02	0.51	0.033	0.084	0.062	1.57
E	4	0.025	0.64	0.033	0.084	0.062	1.57
F	4	0.031	0.79	0.033	0.084	0.062	1.57
G	4	0.05	1.27	0.033	0.084	0.062	1.57
H	4	0.02	0.51	0.049	1.24	0.075	1.91
I	4	0.025	0.64	0.049	1.24	0.075	1.91
J	4	0.031	0.79	0.049	1.24	0.075	1.91
K	4	0.05	1.27	0.049	1.24	0.075	1.91
L	4	0.062	1.57	0.049	1.24	0.075	1.91
M	4	0.02	0.51	0.04	1.02	0.062	1.57
N	4	0.025	0.64	0.04	1.02	0.062	1.57
O	4	0.031	0.79	0.04	1.02	0.062	1.57
P	4	0.05	1.27	0.04	1.02	0.062	1.57
Q	4	0.02	0.51	0.04	1.02	0.075	1.91
R	2	0.025	0.64	0.04	1.02	0.075	1.91
S	2	0.031	0.79	0.04	1.02	0.075	1.91
T	2	0.05	1.27	0.04	1.02	0.075	1.91
U	2	0.062	1.57	0.04	1.02	0.075	1.91
V	2	0.02	0.51	0.04	1.02	0.093	2.36
W	2	0.025	0.64	0.04	1.02	0.093	2.36
X	2	0.031	0.79	0.04	1.02	0.093	2.36
Y	2	0.05	1.27	0.04	1.02	0.093	2.36
Z	2	0.062	1.57	0.04	1.02	0.093	2.36
1	2	0.025	0.64	0.04	1.02	0.1	2.54
2	2	0.031	0.79	0.04	1.02	0.1	2.54
3	2	0.05	1.27	0.04	1.02	0.1	2.54
4	2	0.062	1.57	0.04	1.02	0.1	2.54
5	2	0.02	0.51	0.049	1.24	0.062	1.57
6	2	0.025	0.64	0.049	1.24	0.093	2.36
7	2	0.031	0.79	0.049	1.24	0.093	2.36
8	2	0.05	1.27	0.049	1.24	0.093	2.36
9	2	0.062	1.57	0.049	1.24	0.093	2.36
10	2	0.025	0.64	0.049	1.24	0.1	2.54
11	2	0.031	0.79	0.049	1.24	0.1	2.54
12	2	0.05	1.27	0.049	1.24	0.1	2.54
13	2	0.062	1.57	0.049	1.24	0.1	2.54
14	2	0.025	0.64	0.049	1.24	0.125	3.18
15	2	0.031	0.79	0.049	1.24	0.125	3.18
16	2	0.05	1.27	0.049	1.24	0.125	3.18
17	2	0.062	1.57	0.049	1.24	0.125	3.18



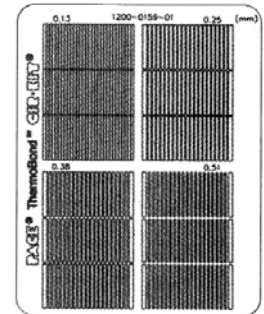
SEC.	# OF TRACES	TRACK WIDTH ± .001 (IN)	TRACK WIDTH (mm) NOM.
F	2	0.005	0.13
	3	0.01	0.25
	2	0.02	0.51
	2	0.031	0.79
	1	0.05	0.127
	1	0.062	0.158

SEC.	# OF TRACES	TRACK WIDTH ± .001 (IN)	TRACK WIDTH (mm) NOM.
A	3	0.005	0.13
	2	0.01	0.25
	1	0.02	0.51
	1	0.031	0.79
	1	0.05	0.127
	1	0.062	0.158
E	2	0.005	0.13
	3	0.01	0.25
	2	0.02	0.51
	2	0.031	0.79
	1	0.05	0.127
	1	0.062	0.158

SEC.	# OF TRACES	TRACK WIDTH ± .001 (IN)	TRACK WIDTH (mm) NOM.
G	5	0.02	0.51
H	5	0.01	0.25
I	5	0.031	0.79
J	5	0.05	1.27
K	5	0.01	0.25
L	5	0.062	1.58

SEC.	# OF TRACES	ID ± .001 (IN)	ID (mm) NOM.	OD ± .001 (IN)	OD (mm) NOM.
B	20	0.031	0.79	0.062	0.158
C	20	0.051	0.13	0.125	3.18
D	10	0.051	0.13	0.093	2.36

1200-0160-01-P1  
Variety Frame

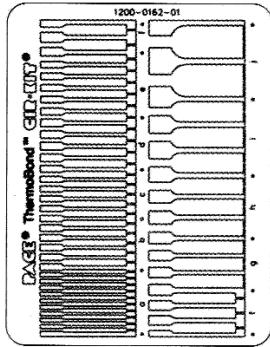


SEC.	# OF TRACES	TRACE WIDTH NOM. (mm)	TRACE WIDTH ± .001 (IN)
1	29	0.127	0.005
2	20	0.381	0.015
3	20	0.254	0.01
4	20	0.508	0.02

1200-0159-01-P1  
Fine Traces

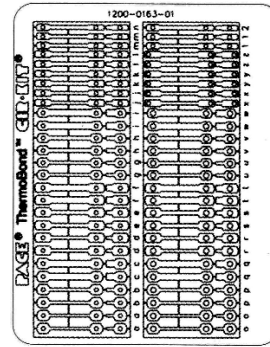
# Support Products

## ThermoBond Cir-Kits



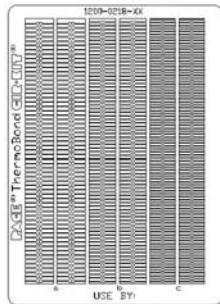
SEC.	# OF PADS	WIDTH OF PAD ± .001(IN)	WIDTH OF PAD (mm) NOM.	WIDTH OF TRACK ± .001(IN)	WIDTH OF TRACK (mm) NOM.
A	10	0.031	0.79	0.02	0.51
B	5	0.051	1.3	0.025	0.64
C	5	0.051	1.3	0.031	0.79
D	5	0.062	1.57	0.031	0.79
E	5	0.062	1.57	0.041	1.04
F	5	0.08	2.03	0.041	1.04
G	3	0.1	2.54	0.051	1.3
H	3	0.125	3.18	0.062	1.57
I	3	0.156	3.96	0.062	1.57
J	2	0.25	6.35	0.093	2.36

1200-0162-02-P1  
Edge Connector (Gold Plated)



SEC.	# OF PADS	TRACK WIDTH ± .001(IN)	TRACK WIDTH (mm) NOM.	PAD SIZE I.D. ± .001(IN)	PAD SIZE I.D. (mm) NOM.	PAD SIZE O.D. ± .001(IN)	PAD SIZE O.D. (mm) NOM.	PAD WIDTH ± .001(IN)	PAD WIDTH (mm) NOM.
A	6	0.02	0.51	0.031	0.79	0.1	0.254	0.08	2.03
B	6	0.025	0.64	0.031	0.79	0.1	0.254	0.08	2.03
C	6	0.05	1.27	0.031	0.79	0.1	0.254	0.08	2.03
D	6	0.025	0.64	0.031	0.79	0.125	3.18	0.07	1.78
E	6	0.031	0.79	0.031	0.79	0.125	3.18	0.07	1.78
F	6	0.05	1.27	0.031	0.79	0.125	3.18	0.07	1.78
G	6	0.025	0.64	0.031	0.79	0.09	2.29	0.07	1.78
H	6	0.031	0.79	0.031	0.79	0.09	2.29	0.07	1.78
I	6	0.05	1.27	0.031	0.79	0.09	2.29	0.07	1.78
J	6	0.025	0.64	0.031	0.79	0.125	3.18	0.05	1.27
K	6	0.031	0.79	0.031	0.79	0.125	3.18	0.05	1.27
L	6	0.031	0.79	0.031	0.79	0.125	3.18	0.05	1.27
M	6	0.025	0.64	0.031	0.79	0.125	3.18	0.041	1.04
N	3	0.031	0.79	0.031	0.79	0.125	3.18	0.041	1.04
O	6	0.02	0.51	0.041	1.04	0.1	2.54	0.08	2.03
P	6	0.025	0.64	0.041	1.04	0.1	2.54	0.08	2.03
Q	6	0.05	1.27	0.041	1.04	0.1	2.54	0.08	2.03
R	6	0.025	0.64	0.041	1.04	0.125	3.18	0.07	1.78
S	6	0.031	0.79	0.041	1.04	0.125	3.18	0.07	1.78
T	6	0.05	1.27	0.041	1.04	0.125	3.18	0.07	1.78
U	6	0.025	0.64	0.041	1.04	0.09	2.29	0.07	1.78
V	6	0.031	0.79	0.041	1.04	0.09	2.29	0.07	1.78
W	6	0.05	1.27	0.041	1.04	0.09	2.29	0.07	1.78
X	6	0.025	0.64	0.031	0.79	0.125	3.18	0.05	1.27
Y	6	0.031	0.79	0.031	0.79	0.125	3.18	0.05	1.27
Z	6	0.031	0.79	0.031	0.79	0.125	3.18	0.05	1.27
1	6	0.025	0.64	0.031	0.79	0.125	3.18	0.041	1.04
2	3	0.031	0.79	0.031	0.79	0.125	3.18	0.041	1.04

1200-0163-01-P1  
Dip Pad

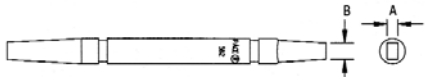


SEC.	PAD SIZE DIA ± .001(IN)	PAD SIZE DIA (mm) NOM.	WIDTH OF TRACK ± .001(IN)	WIDTH OF TRACK (mm) NOM.
A	0.03	0.76	0.008	0.2
B	0.023	0.58	0.008	0.2
C	0.017	0.43	0.008	0.2

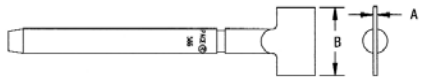

1200-0218-01-P1  
BGA Variety

# ThermoBond Tips

## Double Sided Tips

TIP	DESCRIPTION	PART NUMBERS
	3.2mm (0.125") diameter & 2mm x 3mm (0.08" x 0.12") Rectangle (A x B)	1121-0582-P1

## Single Sided Tips

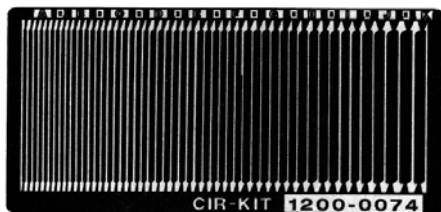
TIP	DESCRIPTION	PART NUMBERS
	0.79mm x 12.7mm (0.031" x 0.5") Rectangle (A x B)	1121-0586-P1
	1.9mm x 13.46mm (0.075" x 0.53") Rectangle (A x B)	1121-0589-P1

# Support Products

## Cir-Kit Replacement Parts

DESCRIPTION	PART NUMBERS
Setting Tool Assembly, Upper Setting Tool	6000-0051
Setting Tool Guide	6000-0054
Support Tool Base	1321-0054
Edge Connector Clamp Assembly	6000-0130
Bonding Kit	6999-0005
Kapton Tape, 12.7mm (0.5") x 76.2mm (3.0") 25 pieces	1289-0016-01P25

## Non-ThermoBond Cir-Kits Frames

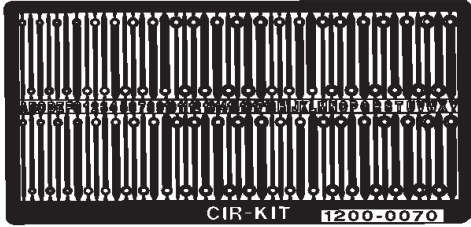


Straight Run Frame  
1200-0074-P1

RUN TABULATION CHART		
RUN DESIGNATIONS	RUN WIDTH	# OF RUNS
A	0.015	9
B	0.02	6
C	0.025	6
D	0.031	6
E	0.041	6
F	0.051	6
G	0.062	6
H	0.075	4
J	0.093	3
K	0.1	4

# Support Products

## Non-ThermoBond Cir-Kits Frames



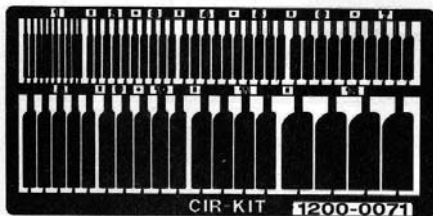
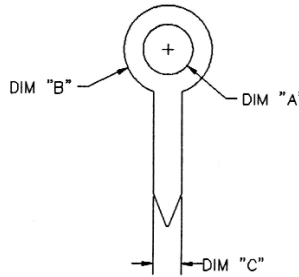
Track Pad Frame, (Selector Type) 1200-0070-P1  
Track-Pad Frame, choice of one size on the above frame

B, G, (letter size)

1200-0011\_

An example would be 1200-0011B.  
This would be a frame containing pad B only.

PAD TABULATION CHART							
PAD DESIGNATION	"A"	"B"	"C"	PAD DESIGNATION	"A"	"B"	"C"
B	0.033	0.051	0.025	1	0.041	0.062	0.02
G	0.033	0.062	0.051	2	0.041	0.062	0.025
				3	0.041	0.062	0.031
				4	0.041	0.062	0.051
				5	0.041	0.075	0.02
				6	0.041	0.075	0.025
				7	0.041	0.075	0.031
				8	0.041	0.075	0.051
				9	0.041	0.075	0.062
				10	0.041	0.093	0.02
				11	0.041	0.093	0.025
				12	0.041	0.093	0.031
				13	0.041	0.093	0.051
				14	0.041	0.093	0.062
				15	0.041	0.1	0.025
				16	0.041	0.1	0.031
				17	0.041	0.1	0.051
				18	0.041	0.1	0.062



Edge Connector  
Frame 1200-0071-P1

EDGE CONNECTOR TABULATION CHART			
CONNECTOR DESIGNATION	"A" WIDTH	"B" WIDTH	# OF CONNECTORS
1	0.031	0.02	10
2	0.051	0.025	5
3	0.051	0.031	5
4	0.062	0.031	5
5	0.062	0.041	5
6	0.08	0.041	5
7	0.08	0.041	5
8	0.1	0.051	5
9	0.125	0.051	2
10	0.125	0.062	3
11	0.156	0.062	4
12	0.25	0.093	4

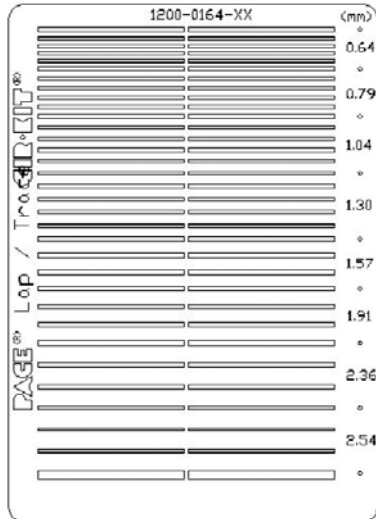


\* These Frames do not have a dry-film adhesive backing

NOTE: Dimensions are  $\pm .003''$

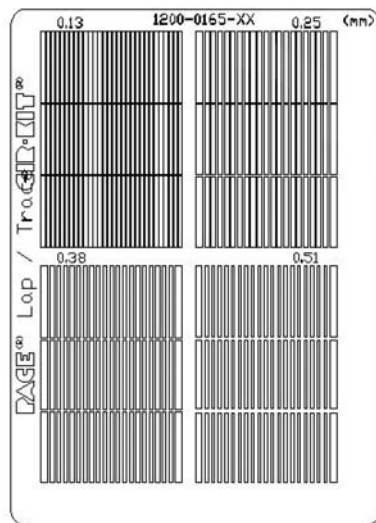
# Support Products

## Non-ThermoBond Cir-Kits Frames



Lap / Trace (Straight) 1200-0164-03-P1

SEC.	# OF TRACES	TRACE WIDTH NOM. (mm)	TRACE WIDTH ± .001 (IN)
1	29	0.127	0.005
2	20	0.381	0.015
3	20	0.254	0.01
4	20	0.508	0.02



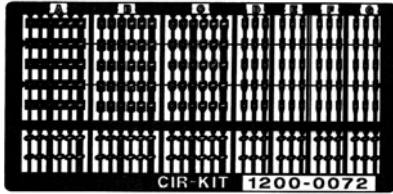
Lap / Trace (Fine) 1200-0165-03-P1

ROW	# OF TRACES	TRACE WIDTH NOM. (mm)	TRACE WIDTH ± .001 (IN)
1	5	0.64	0.025
2	5	0.79	0.031
3	5	1.04	0.041
4	5	1.3	0.051
5	3	1.57	0.062
6	3	1.91	0.075
7	3	2.36	0.093
8	3	2.54	0.1

\* These Frames do not have a dry-film adhesive backing

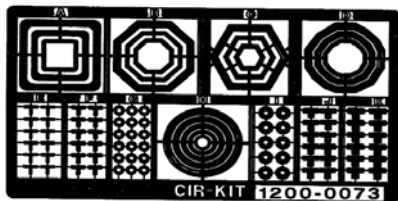
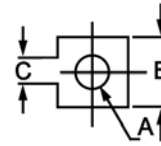
# Support Products

## Non-ThermoBond Cir-Kits Frames



Dip Pad Frame 1200-0072-P1

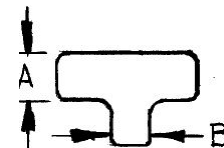
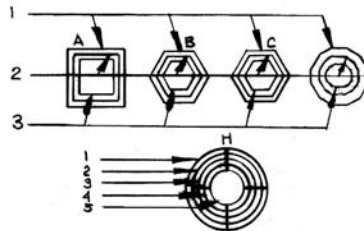
FRAME DESIGNATION	"A" WIDTH	"B" Width		"b" WIDTH
		RECT. PADS	ROUND PADS	
		A1	0.031	
A2	0.031	0.08	0.07	0.025
A3	0.031	0.08	0.07	0.05
A4	0.041	0.08	0.07	0.02
A5	0.041	0.08	0.07	0.025
A6	0.041	0.08	0.07	0.05
B1	0.031	0.07	0.07	0.025
B2	0.031	0.07	0.07	0.031
B3	0.031	0.07	0.07	0.05
B4	0.041	0.07	0.07	0.025
B5	0.041	0.07	0.07	0.031
B6	0.041	0.07	0.07	0.05
C1	0.031	0.07	0.07	0.025
C2	0.031	0.07	0.07	0.031
C3	0.031	0.07	0.07	0.05
C4	0.041	0.07	0.07	0.025
C5	0.041	0.07	0.07	0.031
C6	0.041	0.07	0.07	0.05
D1	0.041	0.05	0.062	0.025
D2	0.031	0.05	0.062	0.031
D3	0.031	0.05	0.062	0.031
E1	0.031	0.05	0.062	0.025
E2	0.031	0.05	0.062	0.031
E3	0.031	0.05	0.062	0.031
F1	0.031	0.05	0.062	0.02
F2	0.031	0.05	0.062	0.031
F3	0.031	0.05	0.062	0.031
G1	0.031	0.041	0.062	0.025
G2	0.031	0.041	0.062	0.031
G3	0.031	0.041	0.062	0.031



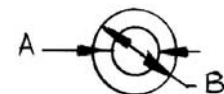
Dip Pad Frame 1200-0073-P1

FRAME DESIGNATION	ANGLE TRACK TABULATION CHART				
	Track Width				
	1	2	3	4	5
A	0.062	0.051	0.031		
B	0.062	0.051	0.031		
C	0.062	0.051	0.031		
D	0.062	0.051	0.031		
H	0.062	0.051	0.031	0.031	0.02

"T" TABULATION CHART			
FRAME DESIGNATION	"A" WIDTH	"B" WIDTH	# OF T'S
E	0.02	0.02	12
F	0.061	0.031	12
K	0.051	0.051	12
L	0.062	0.062	12



PAD TABULATION CHART			
FRAME DESIGNATION	"A" WIDTH	"B" WIDTH	# OF PADS
G	0.051	0.093	18
J	0.051	0.125	10



\* These Frames do not have a dry-film adhesive backing



# Support Products

## Non-ThermoBond Cir-Kits

DESCRIPTION	PART NUMBERS
<p>Cir-Kit, Basic Version (A Selection for Mixed Technology Repairs)</p> <p>Complete Consisting of:</p> <ul style="list-style-type: none"> <li>Track Pad Frame (Selector Type)</li> <li>Straight Run Frame</li> </ul> <p>Other Accessories:</p> <ul style="list-style-type: none"> <li>Eyelets and Funnelets (qty of 100 each in kits)</li> </ul> <ul style="list-style-type: none"> <li>Setting Tool Assembly, Upper Setting Tool</li> <li>Support Tool, Lower Setting Tool</li> <li>Support Tool Base</li> </ul>	<p>6993-0037</p> <p>1200-0070-P1 1200-0074-P1</p> <p>1347-0013-P100 1347-0016-P100 1347-0007-P100 1347-0009-P100</p> <p>6000-0051 1132-0017-P1 1321-0054</p>
<p>Cir-Kit, Advanced Version</p> <p>Complete Consisting of:</p> <ul style="list-style-type: none"> <li>Cir-Kit Frames</li> <li>Track Pad Frame (Selector Type)</li> <li>Straight Run Frame</li> <li>Dip Pad Frame</li> <li>Variety Frame (Angles, T's, Pads)</li> </ul> <p>Other Accessories:</p> <ul style="list-style-type: none"> <li>Eyelets and Funnelets (qty of 100 each in kits)</li> </ul> <ul style="list-style-type: none"> <li>Abrasive Stick</li> <li>Setting Tool Assembly, Upper Setting Tool</li> <li>Setting Tool Guide</li> <li>Support Tool, Lower Setting Tool</li> <li>Support Tool Base</li> </ul>	<p>6993-0077</p> <p>1200-0070-P1 1200-0074-P1 1200-0072-P1 1200-0073-P1</p> <p>1347-0013-P100 1347-0016-P100 1347-0007-P100 1347-0009-P100 1347-0010-P100 1347-0051-P100 1347-0053-P100</p> <p>1129-0014 6000-0051 6000-0054 1132-0017-P1 1321-0054</p>

# Support Products

## Non-ThermoBond Cir-Kits and Stencils

DESCRIPTION	PART NUMBERS
Cir-Kit, Master Version	6993-0082
Complete Consisting of:	
Cir-Kit Frames	
Track Pad Frame (Selector Type)	1200-0070-P1
Straight Run Frame	1200-0074-P1
Dip Pad Frame	1200-0072-P1
Variety Frame (Angles, T's, Pads)	1200-0073-P1
Edge Connector Frame	1200-0071-P1
Other Accessories:	
Eyelets and Funnelets (qty of 100 each in kits)	1347-0013-P100 1347-0016-P100 1347-0007-P100 1347-0009-P100 1347-0010-P100 1347-0051-P100 1347-0053-P100
Adhesive Kit	1239-0011
Abrasive Stick	6000-0130
Edge Connector Clamp Assembly	1129-0014
Setting Tool Assembly, Upper Setting Tool	6000-0051
Setting Tool Guide	6000-0054
Support Tool, Lower Setting Tool	1132-0017-P1
Support Tool Base	1321-0054

## Stenciling Kits - Requires Stencil Bracket Kit (Part Number 6993-0248)

OPTIONAL STENCIL	PART NUMBERS	OPTIONAL STENCIL	PART NUMBERS
Stencil, 35mm x 388	1035-0388-P1	Stencil, 13mm x 144	1013-0144-P1
Stencil, 35mm x 456	1035-0456-P1	Stencil, 13mm x 64	1013-0064-P1
Stencil, 35mm x 313	1035-0313-P1	Stencil, 12mm x 144	1012-0144-P1
Stencil, 35mm x 352	1035-0352-P1	Stencil, 12mm x 160	1012-0160-P1
Stencil, 35mm x 480	1035-0480-P1	Stencil, 11mm x 8 x 72	1011-0072-P1
Stencil, 27mm x 352	1027-0352-P1	Stencil, 40mm x 503	1040-0503-P1
Stencil, 27mm x 316	1027-0316-P1	Stencil, 40mm x 432	1040-0432-P1
Stencil, 27mm x 225	1027-0225-P1	Stencil, 25mm x 357	1025-0357-P1
Stencil, 27mm x 256	1027-0256-P1	Stencil, 25mm x 360	1025-0360-P1
Stencil, 27mm x 272	1027-0272-P1	Stencil, 19mm x 225	1019-0225-P1
Stencil, 27mm x 292	1027-0292-P1	Stencil, 19mm x 52	1019-0052-P1
Stencil, 27mm x 324	1027-0324-P1	Stencil, 16.5 x 8 x 52	1016-0052-P1
Stencil, 27mm x 328	1027-0328-P1	Stencil, 33mm x 503	1033-0503-P1
Stencil, 27mm x 336	1027-0336-P1	Stencil, 14 x 22 x 119	1014-0119-P1
Stencil, 23mm x 169	1023-0169-P1	Stencil, 4mm x 24	1004-0024-P1
Stencil, 23mm x 288	1023-0288-P1	Stencil, 4mm x 28	1004-0028-P1
Stencil, 23mm x 324	1023-0324-P1	Stencil, 4mm x 24	1004-2024-P1
Stencil, 23mm x 208	1023-0208-P1	Stencil, 31mm x 304	1031-0304-P1
Stencil, 23mm x 256	1023-0256-P1	Stencil, 31mm x 329	1031-0329-P1
Stencil, 23mm x 484	1023-0484-P1	Stencil, 31mm x 316	1031-0316-P1
Stencil, 17mm x 208	1017-0208-P1	Stencil, 8mm x 48	1008-0048-P1
Stencil, 17mm x 256	1017-0256-P1	Stencil, PLCC 28	1012-0028-P1
Stencil, 15mm x 156	1015-0156-P1	Stencil, 9mm x 56	1009-0056-P1
Stencil, 15mm x 160	1015-0160-P1	Stencil, 24mm x 241	1024-0241-P1
Stencil, 15mm x 196	1015-0196-P1	Stencil, 6mm x 40	1006-0040-P1
Stencil, 15mm x 196	1015-0196-P1		

# Accessories

## Training Kits & Aids

DESCRIPTION		PART NUMBERS
Soldering	Terminal Soldering Kit	6030-0062
	Axial Lead Component Soldering Kit	6030-0063
	I.C. Soldering Kit	6030-0019
	SOICL-20 Kit	6030-0065
	Soldering Skill Evaluation Kit	6030-0001
Repair	Repair Skills Development Kit	6030-0229
	Desoldering Demonstration Board (Mounted Components)	6030-0011
	Multilayer Training Kit	6993-0104
	Flex-Circuit Training Kit	6993-0103
Surface Mount	SMD Kit, Small Components (SOIC, chip caps, SOT, MELF)	6030-0017
	SMD Kit, Large Components (SOIC, OFP, PLCC-28, PLCC-68, SOLIC)	6030-0018
	Board only, for above	1200-0208
	Small Populated SMD Board	6020-0068
Replacement Parts	QFP 160	1187-0178-P24
	TQFP 100	1187-0179-P90
	TSOP 32	1187-0180-P156
	SOIC 14-Pin, Dummy	1187-0081-P5
	Chip Cap, 0805 Dummy	1187-0082-P10
	Chip Cap, 1206 Dummy	1187-0083-P10
	SOT-23 Transistor, Dummy	1187-0084-P10
	PLCC-28 lead, Dummy	1187-0086-P3
	PLCC-68 lead, Dummy	1187-0087-P3
	SOICL-20 pin, Dummy	1187-0088-P3
	Turret Terminals	1205-0012-P100
	Hook Terminals	1205-0048-P100
	Connector Pins	1205-0014-P100
	Epoxy Kit, Two-Part	1233-0004-P1

# PACE BGA Rework Systems



## TF 1500/1700 Optional Items and Replacement Parts

DESCRIPTION	PART NUMBERS
Fuse Holder 5 x 20 mm	1161-0008-P1
Micro-Positioner	1251-0117-P1
Panel Mount Fitting (vacuum)	1259-0135-P1
Low Pressure Pump	1334-0021-P1
Nitrogen Solenoid	1336-0047-P1
Flowmeter (Manual)	1348-0613-P1
Diaphragm Pump (vacuum) TF 1500 Only	1348-0614-P1
Diaphragm Pump (vacuum) TF 1700 Only	6000-0311-P1
Blower Pump (230 volt)	1336-0046-P1
Blower Pump (120 volt)	1360-0045-P1
Air Flow Sensor	3008-0138-P1
Laser Pointer	6000-0239-P1
Board Cooling Fan	6000-0255-P1
Top Heater Assembly (120 volt) TF 1500	6008-0203-P1
Top Heater Assembly (230 volt) TF 1500	6000-0243-P1
Pre-heater Assembly (120 volt) TF 1500	6000-0265-P1
Pre-heater Assembly (230 volt) TF 1500	6000-0266-P1
High Voltage PCB (TF 1500/TF 1700)	6020-0155-P1
Suction Cup (includes 3)	6993-0202-P1
Flat Screen Monitor 15" inch	7015-0010-P1
PCB Main TF 1500	6020-0171-P1
PCB Main TF 1700	6020-0205-P1
Top Heater (120 volt) TF 1700	6000-0308-P1
Top Heater (230 volt) TF 1700	6000-0317-P1
Pre Heater (120 volt) TF 1700	6000-0335-P1
Pre Heater (230 volt) TF 1700	6000-0336-P1
TF 1700 Top Heater 230v with Front Theta Control	6000-0344-P1
TF 1700 Top Heater 120v with Front Theta Control	6000-0343-P1
Nitrogen Solenoid TF 1700	6000-0313-P1
Air Flow Sensor (Systems with Theta adjustment on front)	3008-0280-P1
Auto Control Flow meter (Systems with Theta adjustment on front)	1198-0019-M-P1

# PACE BGA Rework Systems



## TF 1500/1700 Optional Items and Replacement Parts

DESCRIPTION	PART NUMBERS
PV-65 Pik Vac Vacuum Wand	7027-0001-P1
Optical Alignment Kit	4018-0100-P1
Vacuum Pik Kit TF 15/2500	6993-0060-P1
Vacuum Pik Kit TF 17/2700	6993-0276-P1
Small Vacuum Pik (TF15/2500 only)	1121-0918-P1
Small Vacuum Pik (TF17/2700 only)	1121-0927-P1
Odd Shaped Board Holder Kit	6000-0244-P1
K-Type Thermocouple Pk2	1340-0174-P1
Hex Key Set	6016-0033
Stencil Platform Assembly	6000-0247-P1
Flux Tray Assembly	6000-0245-P1
Cable, RS232	3008-0175
Tool, Nozzle/Chip Assy	1100-0231-P1
PCB Support	6000-0297-P1
Hot Grip Removal Pad	1100-0307
Stencil, Component, Leads	1001-0001
Centering Clamp Assembly	6000-0285-P1
Pace Mouse Mat	1317-0049

# PACE BGA Rework Systems



## TF 2500/2700 Optional Items and Replacement Parts

DESCRIPTION	PART NUMBERS
Fuse, 0.5 A, Slo Blo (230 volt)	1159-0213-P5
Fuse Holder 5 x 20 mm	1161-0008-P1
Micro-Positioner	1251-0117-P1
Panel Mount Fitting (vacuum)	1259-0135-P1
Low Pressure Pump	1334-0021-P1
Nitrogen Solenoid TF 2500	1336-0047-P1
Nitrogen Solenoid TF 2700	6000-0313-P1
Diaphragm Pump (vacuum) TF 2500 Only	1348-0614-P1
Diaphragm Pump (vacuum) TF 2700 Only	6000-0311-P1
Blower Pump (230 volt)	1360-0046-P1
Blower Pump (120 volt)	1360-0045-P1
Air Flow Sensor	3008-0138-P1
Laser Pointer	6000-0239-P1
Board Cooling Fan	6000-0255-P1
Top Heater Assembly (120 volt) TF 2500	6000-0278-P1
Top Heater Assembly (230 volt) TF 2500	6000-0279-P1
Pre-heater Assembly (120 volt) TF 2500 & TF 2700	1336-0071-P1
Pre-heater Assembly (230 volt) TF 2500 & TF 2700	1336-0072-P1
High Voltage PCB (TF 2500/TF 2700)	6020-0155-P1
PCB Main TF 2500/TF 2700	6020-0182-P1
Flat Screen Monitor 17" inch	1107-0032-P1
Top Heater (120 volt) TF2700	6000-0318-P1
Top Heater (230 volt) TF 2700	6000-0319-P1
TF 2700 Top Heater 230v with Front Theta Control	6000-0346-P1
TF 2700 Top Heater 120v with Front Theta Control	6000-0345-P1
Air Flow Sensor (Systems with Theta adjustment on front)	3008-0280-P1

# PACE BGA Rework Systems



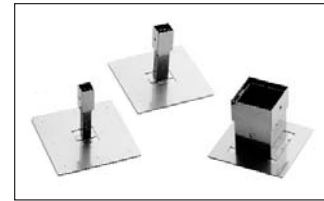
## TF 2500/2700 Optional Items and Replacement Parts

DESCRIPTION	PART NUMBERS
Auxilliary Pre-Heater Therma Couple PCB	6020-0181-P1
Aux Pre Heater Control PCB	6020-0180-P1
Odd Shaped Board Holder Kit	6000-0244-P1
K-Type Thermocouple Pk2	1340-0174-P1
Optical Alignment Kit	4018-0100-P1
Hex Key Set	6016-0033
Stencil Platform Assembly	6000-0247
Pik-Vac Wand	7027-0001-P1
Flux Tray Assembly	6000-0245
Cable, RS232	3008-0175
Vacuum Pik Kit TF 2500	6993-0060-P1
Vacuum Pick Kit TF 2700	6993-0276
Small Vacuum Pik (TF1500/TF2500 only)	1121-0918-P1
Small Vacuum Pik (TF1700/TF2700 only)	1121-0927-P1
Tool, Nozzle/Chip Assy	1100-0231-P1
PCB Support	6000-0298-P1
Hot Grip Removal Pad	1100-0307
Stencil, Component, Leads	1001-0001
Centering Clamp Assembly	6000-0285-P1
Pace Mouse Mat	1317-0049
Leg, Board Holder	1348-0700-01

# ThermoFlo BGA Nozzles

(for use with TF 1500 / TF 1700 / TF 2500 / TF 2700)

Listed below are standard nozzles available from PACE. Custom nozzles can be designed and manufactured for special or non-standard applications. Contact PACE for more information. Alignment templates are included with the nozzle assemblies.




## ThermoFlo Nozzle Chart


MAXIMUM COMPONENT SIZE	NOZZLE DIMENSIONS	NOZZLE P/N
5mm x 5mm (0.19" x 0.19")	8mm x 8mm (0.31" x 0.31")	4038-7001
6mm x 6mm (0.24" x 0.24")	9mm x 9mm (0.35" x 0.35")	4038-7042
6mm x 8mm (0.24" x 0.31")	9mm x 11mm (0.35" x 0.43")	4038-7002
7.3mm x 7mm (0.29" x 0.28")	10.3mm x 10mm (0.40" x 0.40")	4038-7040
8mm x 8mm (0.31" x 0.31")	11mm x 11mm (0.43" x 0.43")	4038-7041
8.1mm x 8.1mm (0.31" x 0.31")	11.1mm x 11.1mm (0.43" x 0.43")	4038-7055
8.2mm x 12.7mm (0.32" x 0.50")	11.2mm x 15.7mm (0.44" x 0.62")	4038-7003
9mm x 9mm (0.35" x 0.35")	12mm x 12mm (0.47" x 0.47")	4038-7004
10mm x 10mm (0.39" x 0.39")	13mm x 13mm (0.51" x 0.51")	4038-7005
11.4mm x 5.1mm (0.49" x 0.20")	14.4mm x 8.1mm (0.56" x 0.31")	4038-7050
13mm x 10mm (0.51" x 0.40")	16mm x 13mm (0.63" x 0.51")	4038-7039
13mm x 13mm (0.51" x 0.51")	16mm x 16mm (0.63" x 0.63")	4038-7006
14mm x 22mm (0.55" x 0.87")	17mm x 25mm (0.67" x 0.99")	4038-7021
15mm x 15mm (0.59" x 0.59")	18mm x 18mm (0.71" x 0.71")	4038-7007
15.34mm x 12.7mm (0.60" x 0.50")	18.34mm x 15.7mm (0.72" x 0.61")	4038-7063
15.6mm x 5.1mm (0.61" x 0.20")	18.6mm x 8.1mm (0.73" x 0.31")	4038-7062
16.5mm x 8mm (0.65" x 0.31")	19.5mm x 11mm (0.77" x 0.43")	4038-7027
17mm x 11mm (0.67" x 0.43")	20mm x 14mm (0.79" x 0.55")	4038-7052
17mm x 17mm (0.67" x 0.67")	20mm x 20mm (0.79" x 0.79")	4038-7008
19mm x 19mm (0.75" x 0.75")	22mm x 22mm (0.87" x 0.87")	4038-7026
20mm x 8mm (0.79" x 0.31")	23mm x 11mm (0.90" x 0.43")	4038-7058
20mm x 20mm (0.79" x 0.79")	23mm x 23mm (0.90" x 0.90")	4038-7061
21mm x 12.75mm (0.83" x 0.50")	24mm x 15.75mm (0.94" x 0.62")	4038-7060
21mm x 25mm (0.83" x 0.98")	23mm x 28mm (0.91" x 1.1")	4038-7029
22mm x 22mm (0.86" x 0.86")	25mm x 25mm (0.98" x 0.98")	4038-7057
23mm x 23mm (0.90" x 0.90")	26mm x 26mm (1.02" x 1.02")	4038-7009
25mm x 25mm (0.98" x 0.98")	28mm x 28mm (1.1" x 1.1")	4038-7025
27mm x 27mm (1.06" x 1.06")	30mm x 30mm (1.18" x 1.18")	4038-7010
28mm x 16mm (1.1" x 0.63")	31mm x 19mm (1.22" x 0.75")	4038-7038
28mm x 28mm (1.1" x 1.1")	31mm x 31mm (1.22" x 1.22")	4038-7048
28.5mm x 17mm (1.12" x 0.67")	31.5mm x 20mm (1.12" x 0.79")	4038-7059
29mm x 29mm (1.14" x 1.14")	32mm x 32mm (1.26" x 1.26")	4038-7030
30mm x 30mm (1.18" x 1.18")	33mm x 33mm (1.3" x 1.3")	4038-7044

MAXIMUM COMPONENT SIZE	NOZZLE DIMENSIONS	NOZZLE P/N
31mm x 31mm (1.22" x 1.22")	33mm x 33mm (1.3" x 1.3")	4038-7031
32mm x 17mm (1.26" x 0.67")	35mm x 20mm (1.37" x 0.79")	4038-7053
32.5mm x 23mm (1.28" x 0.90")	35.5mm x 26mm (1.40" x 1.02")	4038-7051
32.5mm x 25mm (1.28" x 0.98")	35.5mm x 28mm (1.40" x 1.1")	4038-7056
33mm x 33mm (1.29" x 1.29")	36mm x 36mm (1.42" x 1.42")	4038-7028
35mm x 35mm (1.37" x 1.37")	38mm x 38mm (1.5" x 1.5")	4038-7011
38.1mm x 25.8mm (1.50" x 1.01")	41.1mm x 28.8mm (1.61" x 1.13")	4038-7066
40mm x 40mm (1.57" x 1.57")	43mm x 43mm (1.7" x 1.7")	4038-7024
41mm x 41mm (1.61" x 1.61")	43mm x 43mm (1.7" x 1.7")	4038-7047
42mm x 42mm (1.65" x 1.65")	45mm x 45mm (1.77" x 1.77")	4038-7032
42.5mm x 32.5mm (1.67" x 1.40")	45.5mm x 35.5mm (1.80" x 1.39")	4038-7054
43mm x 43mm (1.7" x 1.7")	46mm x 46mm (1.81" x 1.81")	4038-7045
44mm x 33mm (1.73" x 1.29")	47mm x 36mm (1.85" x 1.41")	4038-7064
44mm x 44mm (1.73" x 1.73")	47mm x 47mm (1.85" x 1.85")	4038-7043
44.5mm x 44.5mm (1.75" x 1.75")	47.5mm x 47.5mm (1.87" x 1.87")	4038-7012
46mm x 46mm (1.81" x 1.81")	49mm x 49mm (1.93" x 1.93")	4038-7046
48mm x 48mm (1.89" x 1.89")	51mm x 51mm (2" x 2")	4038-7049
50mm x 50mm (1.97" x 1.97")	53mm x 53mm (2.1" x 2.1")	4038-7022
56mm x 17mm (2.2" x 0.67")	59mm x 20mm (2.32" x 0.79")	4038-7037
60mm x 60mm (2.36" x 2.36")	63mm x 63mm (2.5" x 2.5")	4038-7023
Connector, 16mm x 13mm (0.63" x 0.51")	19mm x 16mm (0.75" x 0.63")	4038-7033
Connector, 19mm x 8mm (0.75" x 0.31")	22mm x 11mm (0.87" x 0.43")	4038-7036
Connector, 27mm x 13mm (1.06" x 0.51")	30mm x 16mm (1.18" x 0.63")	4038-7034
Connector, 30mm x 12mm (1.18" x 0.47")	33mm x 15mm (1.3" x 0.59")	4038-7035
LQFP 9mm x 9mm (0.35" x 0.35")	12mm x 12mm (0.47" x 0.47")	4038-7016
LQFP 12mm x 12mm (0.47" x 0.47")	15mm x 15mm (0.59" x 0.59")	4038-7017
LQFP 14mm x 14mm (0.55" x 0.55")	17mm x 17mm (0.67" x 0.67")	4038-7020
LQFP 16mm x 16mm (0.63" x 0.63")	19mm x 19mm (0.75" x 0.75")	4038-7014
LQFP 16mm x 22mm (0.63" x 0.87")	19mm x 25mm (0.75" x 0.99")	4038-7019
LQFP 22mm x 22mm (0.87" x 0.87")	25mm x 25mm (0.98" x 0.98")	4038-7013
LQFP 26mm x 26mm (1.02" x 1.02")	29mm x 29mm (1.14" x 1.14")	4038-7018
LQFP 30mm x 30mm (1.18" x 1.18")	33mm x 33mm (1.29" x 1.29")	4038-7015
Nozzel Kit	1mm (.04") to 7mm (.28")	6993-0244



# PACE Accessories

FLUX APPLICATOR	DESCRIPTION	PART NUMBERS
	<p>Allows for precise and repeatable application of flux by dipping component.</p>	<p>6993-0218</p>

STENCILING PRODUCTS	DESCRIPTION	PART NUMBERS
	<p>Stencil Bracket Kit</p> <p>Applies solder paste to component, reducing the difficulty and mess associated with PCB stenciling.</p> <p>The Stencil Bracket Kits do not include stencils. Stencils are purchased separately as required by solder ball count geometry on component packages. Both the Stencil Bracket Kit and a stencil are required to apply solder paste to the component. The Stencil Bracket Kits may be used on any of our currently sold stencils.</p>	<p>6993-0248-P1</p>

# Fume Extraction Systems



## Replacement Parts

DESCRIPTION	PART NUMBERS
Arm-Evac 50 Pre-Filter	8883-0125-P5
Arm-Evac 50 Economy Filter	8883-0300-P5
Arm-Evac 50 General Purpose Filter	8883-0280
Arm-Evac 50 CleanRoom Filter	8883-0290
Arm-Evac 50 Adhesive Filter	8883-0295
Arm-Evac 105 Pre-Filter	8883-0111-P5
Arm-Evac 105 High Capacity Pre-Filter	8883-0938-P10
Arm-Evac 105 Economy Filter	8883-0871
Arm-Evac 105 General Purpose Filter	8883-0901
Arm-Evac 105 CleanRoom Filter	8883-0921
Arm-Evac 105 High Capacity Filter	8883-0936
Arm-Evac 105 Adhesive Filter	8883-0951
Arm-Evac 200/250 Pre-Filter	8883-0111-P5
Arm-Evac 200/250 High Capacity Pre-Filter	8883-0938-P10
Arm-Evac 200/250 Economy Filter	8883-0871
Arm-Evac 200/250 General Purpose Filter	8883-0931
Arm-Evac 200/250 CleanRoom Filter	8883-0921
Arm-Evac 200/250 High Capacity Filter	8883-0936
Arm-Evac 200/250 Adhesive Filter	8883-0951
Arm-Evac 500 Pre-Filter	8883-0145-P10
Arm-Evac 500 General Purpose Filter	8883-0955
Arm-Evac 500 CleanRoom Filter	8883-0965
Arm-Evac 500 Carbon Filter	8883-0956
Arm-Evac 105 230v Replacement Fuse	8884-9966-P5
Arm-Evac 105 115v Replacement Fuse	8884-9961-P5
Arm-Evac 50 Replacement Fuse	8884-9965-P5
Arm-Evac 200/250 230v Replacement Fuse	8884-9966-P5
Arm-Evac 200/250 115v Replacement Fuse	8884-9965-P5
Arm-Evac 500 230v Replacement Fuse	8884-9966-P5
Arm-Evac 500 115v Replacement Fuse	8884-9961-P5



## A WORLDWIDE COMMITMENT

With offices worldwide, PACE is a recognized world leader in the development of solutions for the assembly and repair of highly advanced electronics. Our expertise extends back to the dawn of the modern electronics industry. In 1958, PACE introduced training programs for the repair of printed wire assemblies, and soon after, revolutionized the industry by creating the first self-contained vacuum desoldering system.

Today, PACE continues to provide innovative solutions, products and training for the rework, repair and testing of printed circuit assemblies. Our unique capabilities and evolving vision have provided universal solutions for thru-hole and surface mount assembly and rework problems for the most advanced electronics.

Additionally, PACE manufactures Fume Extraction Systems to reduce exposure to harmful particulates and gases created from hand soldering operations. PACE Fume Extraction Systems effectively remove these contaminants from the worker's breathing zone thereby reducing or eliminating health risks and improving productivity.

Our strong commitment and history of achievement has resulted in an unparalleled range of Assembly, Repair and Fume Extraction solutions to meet your needs whether working to ISO-9000, industrial, military or your own internal specifications. Whatever the challenge, PACE stands ready to help you set a new standard.



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## A CUSTOMER COMMITMENT

In 2001 the distinguished Frost & Sullivan Award for the World Surface Mount Technology Rework and Repair Equipment Industry was bestowed upon PACE.

The Frost & Sullivan Market Engineering Customer Service Leadership Award is presented to companies that have demonstrated superior responsiveness to customer needs and value-added support in technology and services.

PACE was selected based upon independent research with customers, key market participants and even our competition. This award reiterates PACE's commitment to excellence from product concept to customer service in the field. Frost & Sullivan's research recognizes that the key to PACE's success in the industry is our interactive approach with customers to provide solutions and respond to end-user feedback when developing products.



In 2002 PACE was awarded World Class Status, signifying that PACE uses best practices in its design, development and manufacturing processes to provide the finest quality products to its customers at the lowest possible cost. The first Maryland based company to receive this coveted award, PACE stands alone in its market segment in achieving this highly regarded status.

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PACE products meet or exceed all applicable military and civilian EOS/ESD, temperature stability and other specifications, including MIL-STD-2000, ANSI/J-STD-001, IPC 7711, IPC 7721 and IPC-A-610.

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