



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

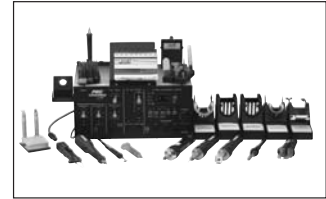
Optional Items and Replacement Parts



| 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 |

Continued overleaf

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 | |



Continued overleaf



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 | |

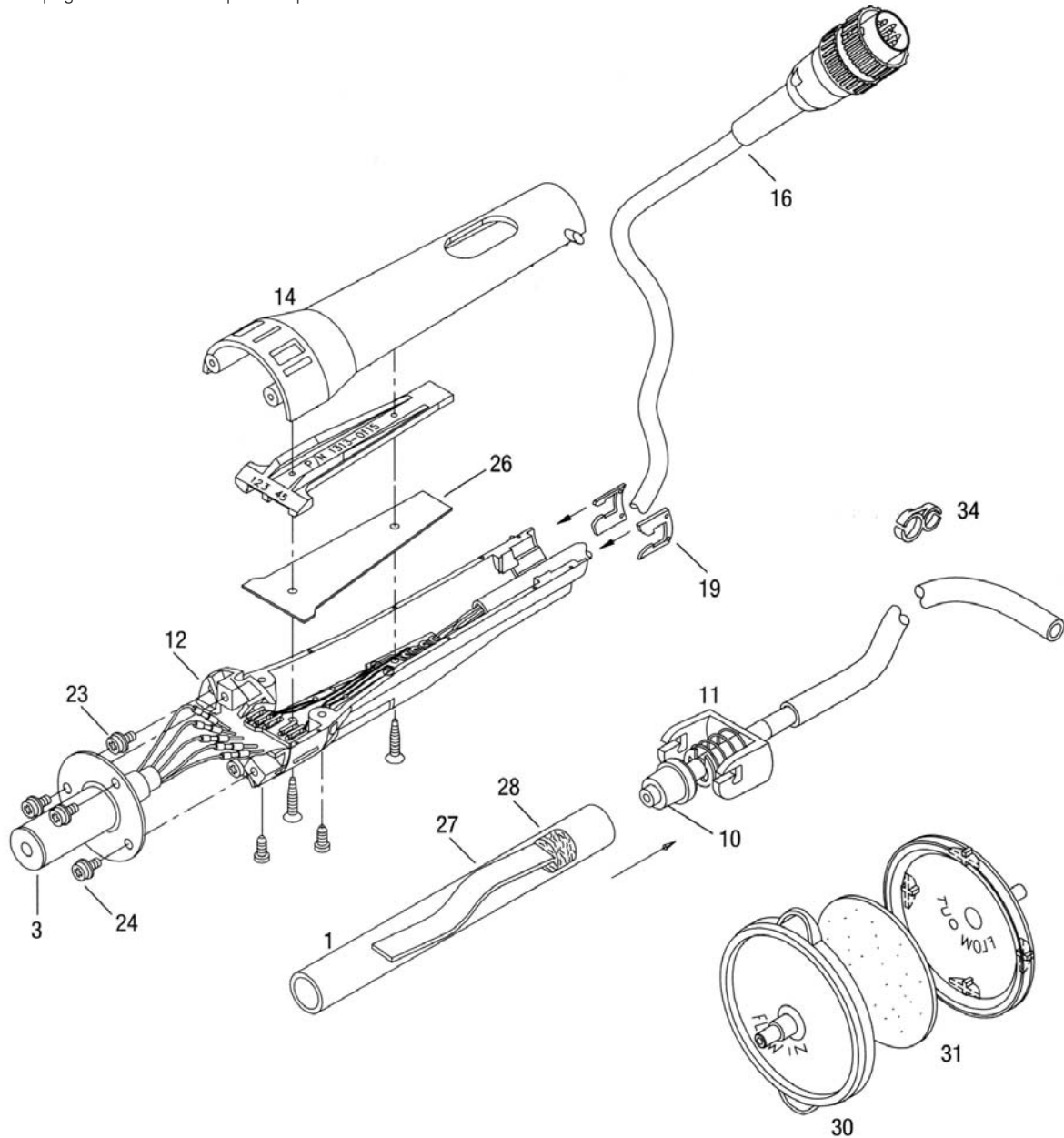
SX-70 Handpiece

SX-70 Replacement Parts Diagram



SX-70 parts Diagram

See page 12 for the description of parts



SX-70 Handpiece

SX-70 Replacement Parts



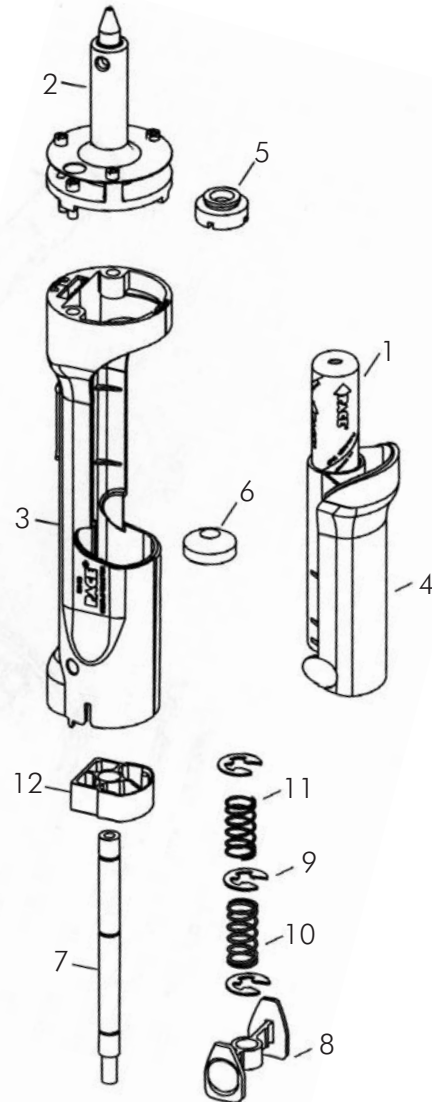
| ITEM | DESCRIPTION | PART NUMBERS |
|------|---|-----------------|
| 1 | Glass Chamber | 1265-0009-P1 |
| 3 | SX-70 Heater and Seal Assembly | 6010-0080-P1 |
| | Front Seal, Heater | 1213-0033-P1 |
| 10 | Rear Seal | 1213-0001-P1 |
| 11 | Rear Seal Retainer Assembly | 4010-0106-P1 |
| 12 | Heat Dissipator | 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 |
| | Sodr-X-Tractor Filters for Glass Chamber | |
| | 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.

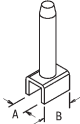
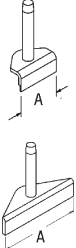
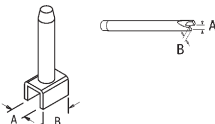
PS-90 Handpiece

Optional Items and Replacement Parts

PS-90 Universal Soldering Iron

| DESCRIPTION | PART NUMBERS | |
|--|--|--------------|
|  <p>PS-90 Handpiece IntelliHeat PS-90 Handpiece Kit IntelliHeat PS-90 SensaTemp Soldering Iron Kit PS-90 SensaTemp Soldering Iron PS-90N SensaTemp Kit PS-90N SensaTemp handpiece PS-90N IntelliHeat handpiece PS-90N IntelliHeat handpiece kit PS-90 Cubby (Available November 2007) Lead Free Cubby (Nov 07) with Green insert Green Replacement handpiece insert for PS-90</p> | 6010-0150-P1 6993-0267-P1 6993-0199-P1 6010-0131-P1 6993-0275-P1 6010-0116-P1 6010-0157-P1 6993-0274-P1 6019-0081-P1 6019-0081-G-P1 1140-0083-G-P1 | |
| | Replacement Parts | |
| | 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") A = 10.2mm (0.4") A = 12.7mm (0.5") A = 17.8mm (0.7") A = 20.3mm (0.8") A = 25.4mm (1.0") | 1121-0512-P1 1121-0514-P1 1121-0473-P1 1121-0416-P1 1121-0497-P1 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

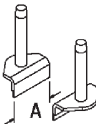
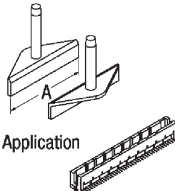
| TIP | DESCRIPTION | SIZE | PART NUMBERS |
|---|---------------------------------|-----------------|--------------|
|  | 1/16" Chisel (High Capacity) | 1.60mm (0.063") | 1121-0414-P5 |
|  | 1/64" Conical | 0.40mm (0.016") | 1121-0357-P5 |
|  | 1/64" Sharp Bent Conical | 0.40mm (0.016") | 1121-0830-P5 |
|  | 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 |

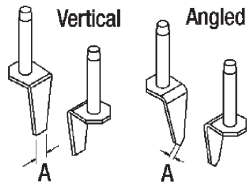

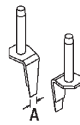


TT-65 ThermoTweez Handpiece Tips

| 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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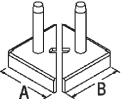


TT-65 ThermoTweez Handpiece Tips

SMT Removal Tips

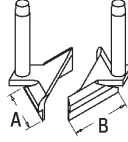
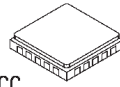
| TIP | DESCRIPTION | TIP SIZE | PART NUMBERS |
|--|--|--|---|
|  <p>Standard Wall: Thickness = 1.3mm (0.050")</p> <p>Application Chip Component</p>  | <p>Chip Component (vertical)</p> <p>Chip Component (vertical)</p> <p>Chip Component (vertical)</p> <p>Chip Component (vertical) Small SOIC</p> | <p>A=0.76mm (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

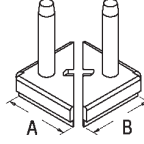
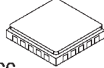
PLCC/PQFP Removal Tips

| 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><i>The ThermoTweez can also remove leadless components (LCCCs) if sized correctly.</i></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

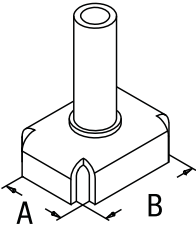
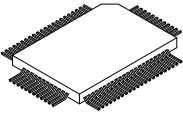
| TIP | DESCRIPTION | TIP SIZE A x B | PART NUMBERS |
|--|---|--|------------------------------|
|  <p>Application</p>  <p>LCCC</p> | Removal Tips for LCCC Packages and small, Fine-Pitch PQFPs | 8.89mm x 6.35mm (0.35" x 0.25") 21.6mm x 21.6mm (0.85" x 0.85") | 1121-0452-P1 1121-0455-P1 |
| | Wall thickness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




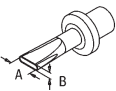
TP-65 ThermoPik Tips

| TIP | DESCRIPTION | TIP SIZE | PART NUMBERS |
|---|---------------------------|---------------------------------|------------------|
|  <p>Application Flat Pack</p>  <p>Note: The TP-65 ThermoPik requires an SX Tip & 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


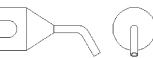

TJ-70 ThermoJet/Replacement Parts & Handpiece Tips

| 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 |
|---|------------------------------------|-------------------------------|
| Chisel Tip Kit Includes one of each of the following tips: | 1/16" Chisel | 6993-0210 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 |
|--|-------------------------|----------------------------------|
| SX-90 Tip Kit Includes one of each of the following tips: | Thermo-Drive (0.030"ID) | 6993-0288-P1 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

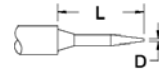
Optional Items and Replacement Parts

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

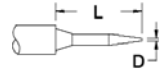
Tip Specifications



| 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

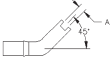






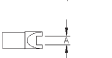

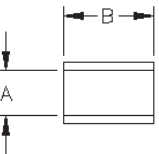
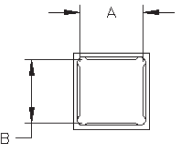
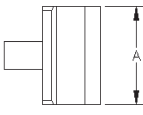


| TIP | DESCRIPTION | TIP SIZE - L | SIZE - D | PART NUMBERS |
|-----|--|------------------|-----------------|--------------|
| | Heat Staking | N/A | 4.04mm (0.159") | 1124-0031-P1 |
| | MiniWave | N/A | 3.05mm (.120") | 1124-0032-P1 |
| | Angled MiniWave | N/A | 3.05mm (.120") | 1124-0033-P1 |
| | 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 |

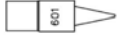


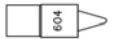

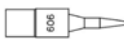




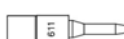













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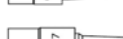
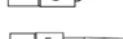








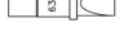
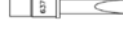

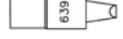




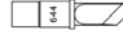
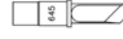


TD-100 Surface Mount Removal Tips

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



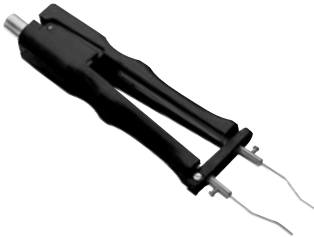
LF-15 LapFlo Pulse Heat Handpiece/Replacement Parts

| 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 |
| | Optional Items and Replacement Parts: | |
| | 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 |

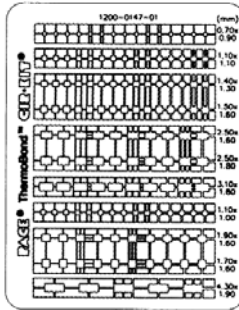
Support Products

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

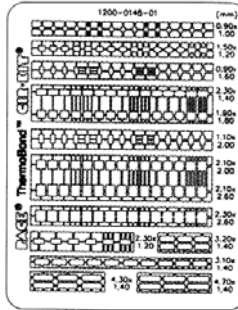
Support Products

ThermoBond Cir-Kits



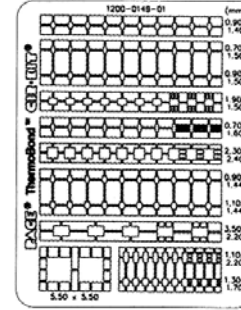
| ROW | # OF PARTS | NOM. SIZE (mm) | SIZE ± .001 (IN) |
|-----|------------|----------------|------------------|
| 1 | 15 | 0.7 x 0.9 | .028 x .035 |
| 2 | 15 | 1.10 x 1.10 | .043 x .043 |
| 3 | 15 | 1.40 x 1.30 | .055 x .051 |
| 4 | 15 | 1.50 x 1.60 | .059 x .063 |
| 5 | 10 | 2.50 x 1.60 | .098 x .063 |
| 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



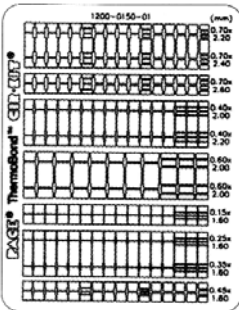
| ROW | # OF PARTS | NOM. SIZE (mm) | SIZE ± .001 (IN) |
|-----|------------|----------------|------------------|
| 1 | 15 | 0.9 x 1.0 | .035 x .039 |
| 2 | 15 | 1.50 x 1.20 | .059 x .047 |
| 3 | 15 | 0.9 x 1.60 | .035 x .063 |
| 4 | 15 | 2.30 x 1.40 | .091 x .055 |
| 5 | 15 | 1.90 x 1.80 | .075 x .071 |
| 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



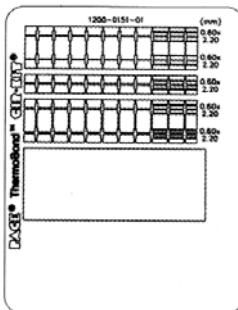
| ROW | # OF PARTS | NOM. SIZE (mm) | SIZE ± .001 (IN) |
|-----|------------|----------------|------------------|
| 1 | 10 | 0.9 x 1.40 | .035 x .055 |
| 2 | 10 | 0.7 x 1.50 | .028 x .059 |
| 3 | 10 | 0.9 x 1.50 | .035 x .059 |
| 4 | 10 | 1.90 x 1.50 | .075 x .059 |
| 5 | 10 | 0.7 x 1.60 | .028 x .063 |
| 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 |

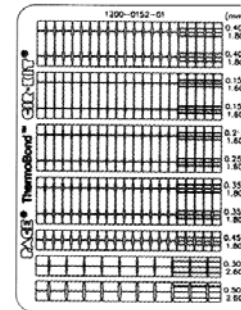
1200-0150-01-P1
SOICs, TSOPs



| 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

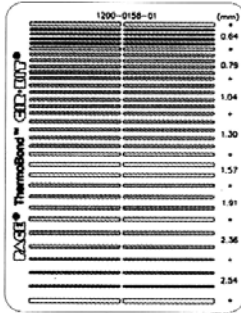


| ROW | # OF PARTS | NOM. SIZE (mm) | SIZE ± .001 (IN) |
|-----|------------|----------------|------------------|
| 1 | 20 | 0.4 x 1.80 | .016 x .071 |
| 2 | 20 | 0.4 x 1.80 | .016 x .071 |
| 3 | 20 | 0.15 x 1.60 | .006 x .063 |
| 4 | 20 | 0.15 x 1.60 | .006 x .063 |
| 5 | 20 | 0.25 x 1.60 | .010 x .063 |
| 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

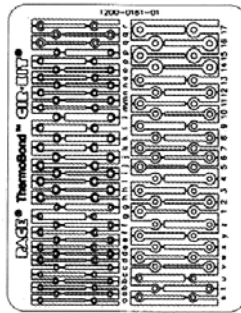
Support Products

ThermoBond Cir-Kits



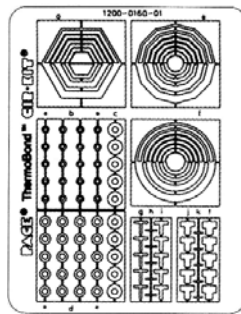
| ROW | # OF TRACES | TRACE WIDTH NOM. (mm) | TRACE WIDTH ± .001 (IN) |
|-----|-------------|-----------------------|-------------------------|
| 1 | 5 | 0.64 | 0.025 |
| 2 | 5 | 0.79 | 0.031 |
| 3 | 5 | 1.04 | 0.041 |
| 4 | 5 | 1.3 | 0.051 |
| 5 | 3 | 1.57 | 0.062 |
| 6 | 3 | 1.91 | 0.075 |
| 7 | 3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



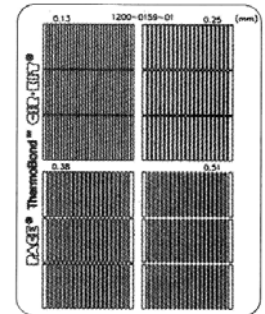
| SEC. | # OF TRACES | TRACK WIDTH ± .001 (IN) | TRACK WIDTH (mm) NOM. |
|------|-------------|-------------------------|-----------------------|
| F | 2 | 0.005 | 0.13 |
| | 3 | 0.01 | 0.25 |
| | 2 | 0.02 | 0.51 |
| | 2 | 0.031 | 0.79 |
| | 1 | 0.05 | 0.127 |
| | 1 | 0.062 | 0.158 |

| 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

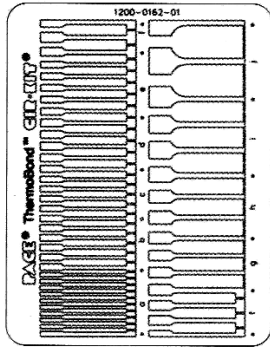


| SEC. | # OF TRACES | TRACE WIDTH NOM. (mm) | TRACE WIDTH ± .001 (IN) |
|------|-------------|-----------------------|-------------------------|
| 1 | 29 | 0.127 | 0.005 |
| 2 | 20 | 0.381 | 0.015 |
| 3 | 20 | 0.254 | 0.01 |
| 4 | 20 | 0.508 | 0.02 |

1200-0159-01-P1
Fine Traces

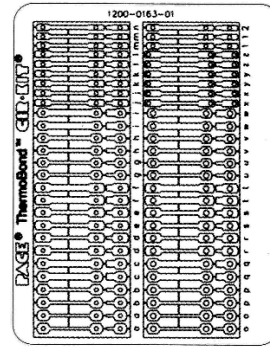
Support Products

ThermoBond Cir-Kits



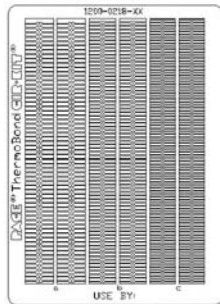
| SEC. | # OF PADS | WIDTH OF PAD ± .001(IN) | WIDTH OF PAD (mm) NOM. | WIDTH OF TRACK ± .001(IN) | WIDTH OF TRACK (mm) NOM. |
|------|-----------|-------------------------|------------------------|---------------------------|--------------------------|
| A | 10 | 0.031 | 0.79 | 0.02 | 0.51 |
| B | 5 | 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

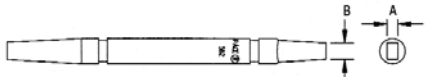


| SEC. | PAD SIZE DIA ± .001(IN) | PAD SIZE DIA (mm) NOM. | WIDTH OF TRACK ± .001(IN) | WIDTH OF TRACK (mm) NOM. |
|------|-------------------------|------------------------|---------------------------|--------------------------|
| A | 0.03 | 0.76 | 0.008 | 0.2 |
| B | 0.023 | 0.58 | 0.008 | 0.2 |
|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

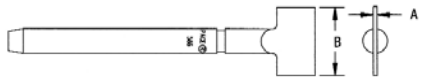

1200-0218-01-P1
BGA Variety

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

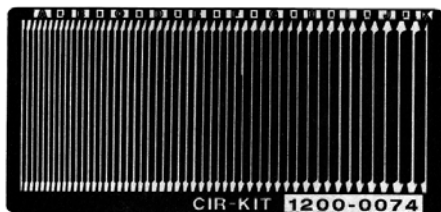
| TIP | DESCRIPTION | PART NUMBERS |
|---|--|--------------|
|  | 0.79mm x 12.7mm (0.031" x 0.5") Rectangle (A x B) | 1121-0586-P1 |
|  | 1.9mm x 13.46mm (0.075" x 0.53") Rectangle (A x B) | 1121-0589-P1 |

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

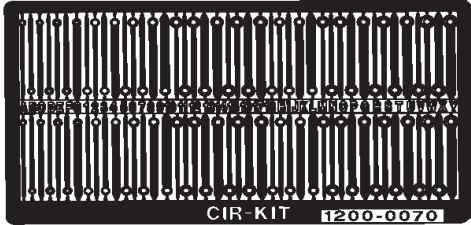


Straight Run Frame
1200-0074-P1

| 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



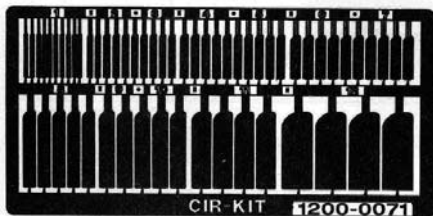
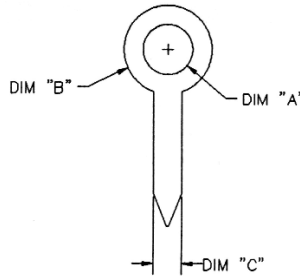
Track Pad Frame, (Selector Type) 1200-0070-P1
Track-Pad Frame, choice of one size on the above frame

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 |

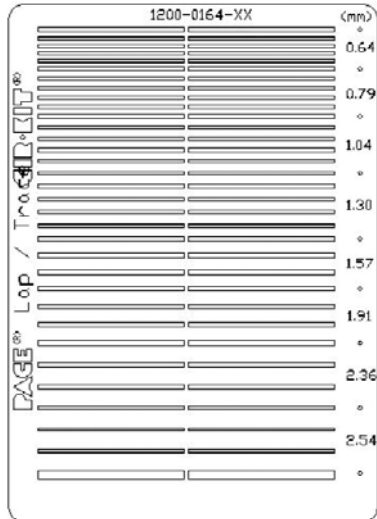


* These Frames do not have a dry-film adhesive backing

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

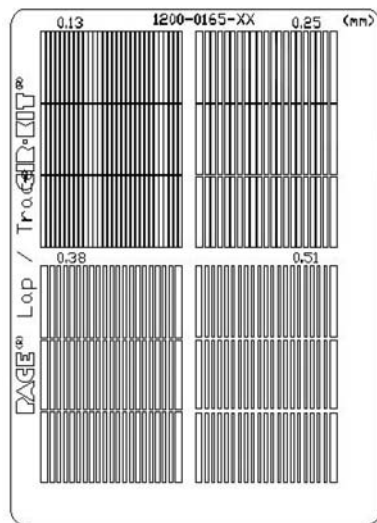
Support Products

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 |



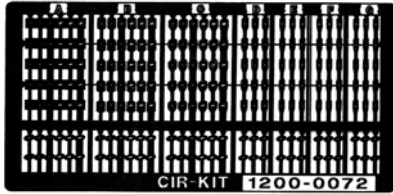
Lap / Trace (Fine) 1200-0165-03-P1

| 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

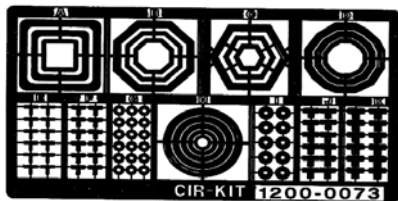
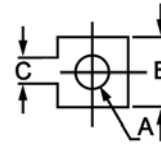
Support Products

Non-ThermoBond Cir-Kits Frames



Dip Pad Frame 1200-0072-P1

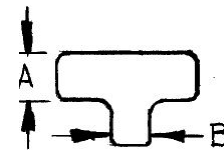
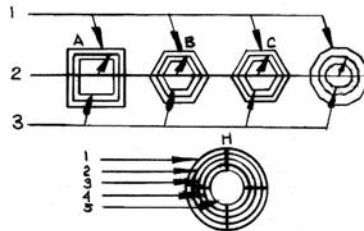
| FRAME DESIGNATION | "A" WIDTH | "B" Width | | "b" WIDTH |
|-------------------|-----------|------------|------------|-----------|
| | | RECT. PADS | ROUND PADS | |
| | | A1 | 0.031 | |
| A2 | 0.031 | 0.08 | 0.07 | 0.025 |
| A3 | 0.031 | 0.08 | 0.07 | 0.05 |
| A4 | 0.041 | 0.08 | 0.07 | 0.02 |
| A5 | 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 |



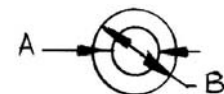
Dip Pad Frame 1200-0073-P1

| 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"> Track Pad Frame (Selector Type) Straight Run Frame <p>Other Accessories:</p> <ul style="list-style-type: none"> Eyelets and Funnelets (qty of 100 each in kits) <ul style="list-style-type: none"> Setting Tool Assembly, Upper Setting Tool Support Tool, Lower Setting Tool Support Tool Base | <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"> Cir-Kit Frames Track Pad Frame (Selector Type) Straight Run Frame Dip Pad Frame Variety Frame (Angles, T's, Pads) <p>Other Accessories:</p> <ul style="list-style-type: none"> Eyelets and Funnelets (qty of 100 each in kits) <ul style="list-style-type: none"> Abrasive Stick Setting Tool Assembly, Upper Setting Tool Setting Tool Guide Support Tool, Lower Setting Tool Support Tool Base | <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



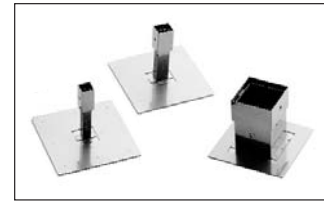
TF 2500/2700 Optional Items and Replacement Parts

| 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.



PACE USA

PACE Inc
255 Air Tool Drive
Southern Pines
NC 28387
USA
Tel: 910-695-7223
Fax: 910-695-1594

PACE EUROPE

PACE Europe Ltd
Technology Centre
Kelvin Drive, Knowlhill
Milton Keynes
MK5 8NH
United Kingdom
Tel: (44) 1908-277666
Fax: (44) 1908-277777

INTERNET

www.paceworldwide.com
P/N 5400-0136 09/07

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.

SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

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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.