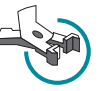


## Special tools

### IC and SMD tools, Fibre optic tools, Vacuum micromanipulator

- IC and SMD tools with precise fine adjustment for inserting, extracting, straightening and cutting IC and SMD components
- High-precision tools for optical fibres for professional stripping, suitable for cutting Kevlar® silks, Vectran™-sheathed wires, etc.
- Vacuum system for precise handling of tiny SMD components and silicon wafers, suitable for assembly and laboratory work





# IC and SMD tools

## IC and SMD tools

- IC and SMD tools for inserting, extracting, straightening and cutting IC and SMD components
- Non-reflecting surface
- ESD-safer






### Inserting and extracting



 **120 mm/4.724 Inch**

- One screwdriver included for fine adjustments.

Model	Dimensions in mm/Inch				
	E		505C	505BGC	505BG
505C	20	Pins:	14 + 6	28	28
505BGC	.787				
505BG	36				
	1.417				
	36	Width:	300	300	.600
	1.417				

### Straightening



 **130 mm/5.118 Inch**

 **120 g/4.24 oz.**

- Practical straightening tool, suitable for straightening contacts, DIL/IC connections.
- Up to 16 connections possible.

Model	Dimensions in mm/Inch		
	A	E	G
808G	23	42	1
	.905	1.653	.039

## IC and SMD tools

### Cutting



**110 mm/4.331 Inch**  
**48 g/1.69 oz.**

- High-precision tip cutter.
- For connections of SMD micro-packages up to 0.25 mm/.010 Inch, also for pitches smaller than 1/20".
- For  $\mu$  pitches below 0.5 mm/.019 Inch, you will need the 670EPF model.
- Please send component when ordering.

Model	Cut	Dimensions in mm/Inch		
		A	D	E
670EP	 Flush			
		10 .394	3 .118	2 .079



**115 mm/4.527 Inch**  
**67 g/2.36 oz.**

- High-precision tip cutter, bent.
- Practical rework tool.
- For cutting DIL contacts directly on the component.
- Ideal for densely printed boards.

Model	Cut	Dimensions in mm/Inch	
		A	D
593AE	 Flush		
		20 .787	4 .157

### Kit for SMD work



- For SMD assembly and repair applications.
- 6-piece tool kit with monitored discharging ESD handles.
- Special tool steel, non-reflecting surface, resharpenable (cutter).
- High-quality precision tweezers, non-magnetic.
- In an ESD-safe plastic case.

Model	Description
<b>3900KC</b>	Kit for SMD work <b>contents:</b>
<b>51SA</b>	Precision tweezers with very pointed tips, bent 30°, relieved; length 115 mm/4.527 Inch
<b>102ACA</b>	SMD tweezers with angled tips and blunted edges, suitable for vertical working with small components; length 115 mm/4.527 Inch
<b>103ACA</b>	SMD tweezers with angled tips and blunted edges for vertical working with small components; length 115 mm/4.527 Inch
<b>150SAMB</b>	SMD tweezers with bent tips 40°, serrated finger grips for gripping small cylindrical parts, dia. 1.2 – 2.5 mm/.047 – .108 Inch; length 120 mm/4.724 Inch
<b>150SAMF</b>	SMD tweezers with straight tips and serrated finger grips for gripping small cylindrical parts, dia. 1.2 – 2.5 mm/.047 – .108 Inch; length 120 mm/4.724 Inch
<b>670EP</b>	High-precision tip cutter for connections of SMD micro-packages up to 0.25 mm/.010 Inch

# Fibre optic tools

## High precision tools for optical fibres

- Suitable for simple and precise stripping of optical fibres
- High grade tool steel
- Non-reflecting surface
- ESD-safe



### Side stripping



 **120 mm /4.724 Inch**  
 **80 g/2.82 oz.**

- Suitable for all types of insulation, Teflon®, Tefzel and optical fibres.
- Unlimited stripping length thanks to side stripping.
- Diameter is set by means of two screws.
- Replaceable cutting blade.



- A = jaw length
- E = width of tips
- F = depth of interchangeable blades
- G = total height of both tips
- H = length of cutting blade

Model	Dimensions in mm/Inch					Wire diameter
	A	E	F	G	H	
552S	21	6.5	6.7	11	9	0.06 mm – 0.60 mm (AWG 42 – 24)
	.827	.256	.264	.433	.354	.002 Inch – .023 Inch

### Holding / gripping



 **120 mm/4.724 Inch**  
 **20 g/0.71 oz.**



- Stainless-steel tweezers with synthetic tips (PPS).
- Non-reflecting surface.
- Non-magnetic.

Model	Description
249SA	Precision tweezers with pointed synthetic tips (PPS) to protect optical fibres and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent.

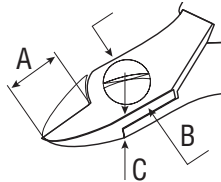
## High precision tools for optical fibres

### Cutting



 **115 mm/4.527 Inch**  
 **67 g/2.36 oz.**



■ Side cutter, suitable for cutting Kevlar® silks, Vectran™-sheathed wires, optical fibres and small stainless wires.




A = length of cutting edges  
 B = head width  
 C = head thickness

Model	Dimensions in mm/Inch		
	A	B	C
<b>599FO</b>	15 .590	10.5 .413	6.5 .256



 **115 mm/4.527 Inch**  
 **67 g/2.36 oz.**

■ Side cutter, suitable for cutting Kevlar® silks, Vectran™-sheathed wires, optical fibres and small stainless wires.

Model	Cut	Dimensions in mm/Inch		
		A	B	C
<b>599TFO</b>	 Semi-flush	15 .590	10.5 .413	6.5 .256

# Vacuum micromanipulator

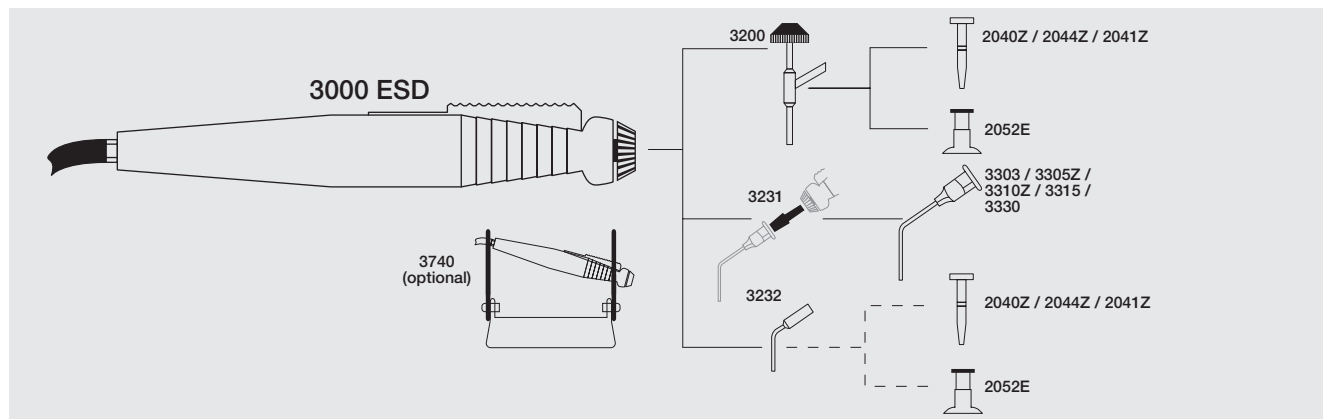
## Vacuum micromanipulator

- Professional vacuum system for precise handling of tiny SMD components and silicon wafers
- Suitable for assembly and laboratory work





### Advantages of the vacuum micromanipulator:

- Easy picking up of components or silicone wafers
- Immediate set-down/release of parts
- Full 360° rotating system
- Direct axial switch for vacuum
- Ergonomic shape reduces hand and wrist fatigue
- ESD-safe



### Handle



 **140 mm/5.512 Inch**  
 **35 g/1.23 oz.**

- Ergonomic handle with axial switch, serrated finger grip for secure handling.

Model	Dimensions in mm/Inch	
<b>3000ESD*</b>	Dia. 10 mm .394 Inch	Handle

\*Not available in North America

## Inserts for 3000ESD housing

### Adapters

Model			Description
<b>3200*</b>	 25 mm .984 Inch	15 g 0.53 oz.	Stainless-steel adapter, rotatable through 360°, straight suction tip for direct working or as an adapter for suction tips or suction cups
<b>3231*</b>	 5 mm .197 Inch	5 g 0.17 oz.	Adapter fix, for working with Series 3300 suction tips
<b>3232*</b>	 15 mm total .590 Inch	3 g 0.10 oz.	Adapter fix, for direct working or as an adapter for suction tips 20442/20412 or suction cup 2052E

### Suction tips, straight

- Polyethylene suction tip.
- For working with 3200 or 3232 adapter.

Model		Outside diameter	Inside diameter
<b>2044Z*</b>		1.3 mm .051 Inch	0.9 mm .035 Inch
<b>2041Z*</b>		2.0 mm .078 Inch	1.4 mm .015 Inch

\*Not available in North America






# Vacuum micromanipulator

## Inserts for 3000ESD housing


### Suction needles

- Stainless-steel suction needle.
- Bent 45°.
- For working with 3200 or 3232 adapter.

Model		Outside diameter	Inside diameter
3303*		0.30 mm .011 Inch	0.16 mm .006 Inch
3305Z*		0.50 mm .020 Inch	0.25 mm .019 Inch
3310Z*		1.0 mm .039 Inch	0.65 mm .025 Inch

### Suction cups

- Silicone suction cup.
- For working with 3200 or 3232 adapter.

Model		Diameter
2052E*		4.5 mm .177 Inch

\*Not available in North America

## Inserts for 3000ESD housing

### Accessories

Model	Description
<b>3714Z*</b>	Diaphragm pump 230 V, 5 l/min, max. vacuum -250 mbar
<b>3008ESD*</b>	Tube, flexible, 1.8 m/70.866 Inch, ESD-safe
<b>3717*</b>	Filter for tube 3008ESD
<b>3740*</b>	Table holder for 3000ESD (without accessories)

## Vacuum kit



- Complete accessories for easy pick-up and immediate set-down of components or silicon wafers.
- Set for laboratory work.
- In an ESD-safe plastic case.

Model	Description
<b>3000KCESD*</b>	Vacuum kit
	<b>contents:</b>
<b>3000ESD</b>	Handle
<b>3200</b>	Adapter, rotatable through 360°
<b>3231</b>	Adapter fix
<b>3305Z, 3310Z, 3315</b>	Suction needles
<b>2052E</b>	Suction cup, dia. 4.5 mm / .177 Inch
<b>KDS 260L</b>	Suction cup, dia. 9.5 mm / .374 Inch
<b>3740</b>	Table holder
<b>3714Z</b>	Diaphragm pump 230 V
<b>3008ESD</b>	Tube, flexible
<b>3717</b>	Filter
<b>102ACA</b>	SMD tweezers, 115 mm / 4.527 Inch, with bent tips and blunted edges. For vertical working with small components. Stainless steel, non-reflecting surface, non-magnetic.

\*Not available in North America