Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Power | Efficiency | Stability
Accuracy | Control

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ERGONOMIC

WELL CRAFTED

DURABLE

CONTENTS

CHP
QUALITY ASSEMBLY TOOLS

Assembly Tools

CHP
QUALITY HAND TOOLS

Hand Tools

CHP
QUALITY STATIC CONTROL

Static Control

C ▲ H ▲ P ▲
QUALITY ASSEMBLY TOOLS

BRUSHLESS
Electric Screwdrivers

The ideal solution for your assembly process, brushless screwdriver eliminates down time from carbon brush replacement. Also suited for clean room applications.

- High performance brushless motor
- Low maintenance, no carbon dust
- Full Auto Shut-off
- Stepless speed control
- ESD Safe

Standard
Series

AT-6500B

Standard Series Specification

Model	Torque Range		Speed(RPM)		Common
	(lbf.in)	(kgf.cm)	(HI)	(LOW)	
AT-2000B	0.26 - 1.7	0.3 - 2.0	1000	700	**Operation:** Lever
AT-3000B	0.43 - 4.3	0.5 - 5.0	1000	700	**Drive Type:** 1/4 Hex
AT-4000B	1.3 - 10.4	1.5 - 12.0	1000	700	**Length:** 229 mm (9.0 in.)
AT-4000FB	1.3 - 10.4	1.5 - 12.0	2000	1400	**Weight:** 0.91 lb.
AT-6000B	1.7 - 13.9	2.0 - 16.0	1000	700	
AT-6500B	3.5 - 17.4	4.0 - 20.0	1000	700	
AT-6800B	4.3 - 21.7	5.0 - 25.0	700	500	

Mini
Series

Compact, space saving design with efficient brushless motor, the mini series is perfect for cell phone and small electronics.

AT-250B

Mini Series Specification

Model	Torque Range		Speed(RPM)		Common
	(lbf.in)	(kgf.cm)	(HI)	(LOW)	
AT-200B	0.26 - 1.7	0.3 - 2.0	1000	600	**Operation:** Lever
AT-250B	0.35 – 2.6	0.4 - 3.0	700	450	**Drive Type:** 4 mm
					Length: 200 mm (7.8 in.)
					Weight: 0.75 lb.

Contents
Screwdriver + Power Supply

Part No.	AT-2000BC	AT-3000BC	AT-4000BC	AT-4000FBC	AT-6000BC	AT-6500BC	AT-6800BC	AT-200BC	AT-250BC
Driver	AT-2000B	AT-3000B	AT-4000B	AT-4000FB	AT-6000B	AT-6500B	AT-6800B	AT-200B	AT-250B
Power Supply	APS-301A	APS-301A	APS-301A	APS-301A	APS-301A	APS-301A	APM-301A	APS-301A	APS-301A
Bit	No.00 x 1.7	No.0 x 2.5	No.1 x 3.0	No.1 x 3.0	No.1 x 3.0	No.1 x 3.0	No.1 x 4.5	No.00 x 1.7	No.0 x 2.0
	No.00 x 2.0	No.1 x 4.5	No.2 x 4.5	No.2 x 4.5	No.2 x 6.0	No.2 x 6.0	No.2 x 6.0	No.0 x 2.0	No.1 x 3.0
Common	Connecting Cable (P/N: AT-2W2122-2)			2 Pin Terminal Connector (P/N: AT-2T6011)			Power Cord (P/N: AT-2W1024)		
	Torque Cover (Installed on Driver)			4 Pin Terminal Connector (P/N: AT-2T6012)					
	RPM Adjustment Tool (P/N: AT-6R3017)			Color Bands					

Screwdriver + Power Supply + Spring Balancer

Part No.	AT-2000B-SET	AT-3000B-SET	AT-4000B-SET	AT-4000FB-SET	AT-6000B-SET	AT-6500B-SET	AT-6800B-SET	AT-200B-SET	AT-250B-SET
Driver + Power Supply	AT-2000BC	AT-3000BC	AT-4000BC	AT-4000FBC	AT-6000BC	AT-6500BC	AT-6800BC	AT-200BC	AT-250BC
Common	Spring Balancer (P/N: AT-SB12)								

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QUALITY ASSEMBLY TOOLS

BRUSH
Electric Screwdrivers

AT-4500 Series

CHP brush type electric screwdrivers feature large side windows for easy access and fast replacement of carbon brushes.

- Full Auto shut-off
- Stepless speed control
- Soft Start feature for safer operation
- ESD Safe

AT-4500

AT-4500 Series Specification

Model	Torque Range		Speed(RPM)		Common
	(lbf.in)	(kgf.cm)	(HI)	(LOW)	
AT-2000	0.26 - 1.7	0.3 - 2.0	700	450	**Operation:** Lever
AT-3000	0.43 - 4.3	0.5 - 5.0	700	450	**Drive Type:** 1/4 Hex
AT-4000	0.87 - 5.2	1.0 - 6.0	700	450	**Length:** 217 mm (8.5 in.)
AT-4500	1.3 - 8.7	1.5 - 10.0	700	450	**Weight:** 0.83 lb.

AT-6000 Series

- High Torque Range
- Full Auto Shut-off
- Stepless speed control
- Soft Start feature for safer operation
- ESD Safe

AT-6500

AT-6000 Series Specification

Model	Torque Range		Speed(RPM)		Common
	(lbf.in)	(kgf.cm)	(HI)	(LOW)	
AT-6000	1.3 - 10.4	1.5 - 12.0	1150	650	**Operation:** Lever
AT-6500	3.5 - 17.4	4.0 - 20.0	850	550	**Drive Type:** 1/4 Hex
AT-6800	4.3 - 21.7	5.0 - 25.0	700	450	**Length:** 228 mm (9.0 in.)
					Weight: 1.1 lb.

Contents
Screwdriver + Power Supply

Part No.	AT-2000C	AT-3000C	AT-4000C	AT-4500C	AT-6000C	AT-6500C	AT-6800C
Driver	AT-2000	AT-3000	AT-4000	AT-4500	AT-6000	AT-6500	AT-6800
Power Supply	APS-351B	APS-351B	APS-351B	APS-351B	APM-301C	APM-301C	APM-301C
Bit	No.00 x 1.7	No.0 x 2.5	No.0 x 2.5	No.1 x 3.0	No.1 x 3.0	No.1 x 3.0	No.1 x 4.5
	No.00 x 2.0	No.1 x 4.5	No.1 x 4.5	No.2 x 4.5	No.2 x 4.5	No.2 x 6.0	No.2 x 6.0
Common	Connecting Cable (P/N: AT-2W2122-2) Torque Cover (Installed on Driver, P/N: AT-0001) Replacement Carbon Brush (P/N: AT-2B1018) RPM Adjustment Tool (P/N: AT-6R3017) 2 Pin Terminal Connector (P/N: AT-2T6011) 4 Pin Terminal Connector (P/N: AT-2T6012) Power Cord (P/N: AT-2W1024) Color Bands, Hex Wrench				Connecting Cable (P/N: AT-2W2133-2) Torque Cover (Installed on Driver, P/N: AT-0002) Replacement Carbon Brush (P/N: AT-2B1016) RPM Adjustment Tool (P/N: AT-6R3017) 2 Pin Terminal Connector (P/N: AT-2T6011) 4 Pin Terminal Connector (P/N: AT-2T6012) Power Cord (P/N: AT-2W1024) Color Bands		

Screwdriver + Power Supply + Spring Balancer

Part No.	AT-2000-SET	AT-3000-SET	AT-4000-SET	AT-4500-SET	AT-6000-SET	AT-6500-SET	AT-6800-SET
Driver + Power Supply	AT-2000C	AT-3000C	AT-4000C	AT-4500C	AT-6000C	AT-6500C	AT-6800C
Common	Spring Balancer (P/N: AT-SB12)						

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QUALITY ASSEMBLY TOOLS

BRUSH
Electric Screwdrivers
Direct Plug-in Series

- Light indicator for brush replacement
- Full auto disk break to prevent sparking
- Push-to-Start type
- ESD safe

AT-5681

Direct Plug-in Series Specification

Model	Torque Range		Speed(RPM)	Common
	(lbf.in)	(kgf.cm)		
AT-3681	1.9 - 10.4	2.2 - 12.0	950	**Operation:** Push Start
AT-5681	3.5 - 15.6	4.0 - 18.0	1000	**Drive Type:** 1/4 Hex
AT-6681	6.9 - 21.7	8.0 - 25.0	650	**Length:** 253 mm (10.0 in.) **Weight:** 1.18 lb.

Contents
Screwdriver + Power Supply

Part No.	AT-3681	AT-5681	AT-6681
Bit	No.1 x 3.0	No.1 x 3.0	No.2 x 4.5
	No.2 x 4.5	No.2 x 6.0	No.2 x 6.0
Common	Driver Replacement Carbon Brush (P/N: AT-2B1014) Torque cover (P/N: AT-0003) Power Cord (P/N: AT-2W1086)		

STANDARD
Power Supply

APM-301C

- Universal power source
- Stepless speed control
- APS-351B and APM-301C: Soft Start feature
- External control terminals

Specifications

Model / Item	APS -301A	APS -351B	APM-301A	APM-301C
Output Voltage	20 – 30V	25 – 35V	20 – 30V	20 – 30V
Input Voltage	100 – 240V			
Power Consumption	60W	59.5W	75W	75W
Dimensions	164 x 64 x 42mm		172 x 84 x 46mm	
Applicable Drivers	AT-200B AT-250B AT-2000B AT-3000B AT-4000B AT-4000FB AT-6000B AT-6500B	AT-2000 AT-3000 AT-4000 AT-4500	AT-6800B	AT-6000 AT-6500 AT-6800

APS-351B

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QUALITY ASSEMBLY TOOLS

ERROR-PROOFING
Power Supply
With Digital Management System

- Monitor assembly process
- Ensure proper installation
- Multiple profile settings
- External control terminals

AM-30

Specifications

Model / Item	AM-30	AM-45	AM-85
Output Voltage	20 – 30V	25 – 35V	20 – 30V
Input Voltage	100 – 240V		
Power Consumption	75W	70W	75W
Dimensions	172 x 84 x 61mm		
Applicable Drivers	AT-200B AT-250B AT-2000B AT-3000B AT-4000B AT-4000FB AT-6000B AT-6500B AT-6800B	AT-2000 AT-3000 AT-4000 AT-4500	AT-6000 AT-6500 AT-6800

COUNT WORK
+OK: 0 2/ 3
+NG: 7 7/ 3
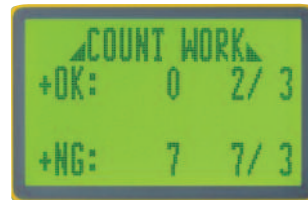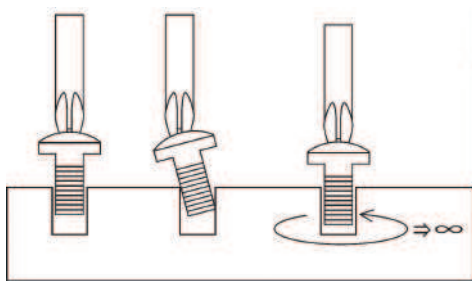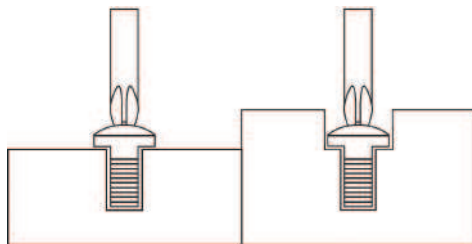
PASS

LCD display with colored lights and beep alarms monitor your assembly process up to 60,000 work pieces.

COUNT WORK
+OK: 0 1/ 3
+NG: 7 7/ 3

No Good

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QUALITY ASSEMBLY TOOLS
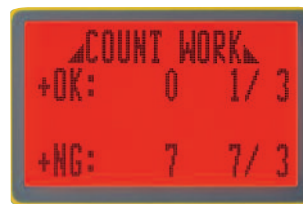
ACCESSORIES
Torque Meter

High-Precision Torque Meter

- Measure torque clockwise/counterclockwise with ±0.5% accuracy
- Rechargeable Ni-MH battery
- High/low torque alarm
- Data analysis (Max, Min, Ave)

Specifications

Model	Standard Measuring Range		Accuracy	Measuring Direction	Power Source	Dimension	Weight
	(lbf.in)	(kgf.cm)				(mm)	(kg)
AP-02	0.03 – 1.8	0.03 – 2.00	±0.5% (199 or less ±1 digit)	Clockwise and counterclockwise	Ni-MH battery	230 x 120 x 60	2.0
AP-10	0.15 – 9.0	0.15 – 10.0					
AP-50	0.75 – 45.0	0.75 – 45.0					
AP-100	1.5 – 90.0	1.5 – 100.0					
AP-300	4.5 – 270.0	4.5 –300.0					

Screw Feeder

Standard Adjustable Screw Feeder

- Adjustable rail and sweeping brush
- Easy adjustment of vibration and speed
- Pick-up rate up to two screws per second

Standard Adjustable Screw Feeder Specifications

Model	Weight		Usable Screws	Maximum Screw Length	Protection and Recovery Functions	Input Voltage	Dimensions
	(kgs)	(lbs)		mm		(VAC)	(mm)
AT-1050	1.8	4.0	M1 - M5	20	Overload protection circuit, reverse power prevention circuit	100 - 240	185 x 130 x 150
AT-1060	4.8	10.6	M1 - M6	25			235 x 165 x 180

Digital Counting Screw Feeder Specifications

Model	Weight		Usable Screws	Maximum Screw Length	Protection and Recovery Functions	Input Voltage	Dimensions
	(kgs)	(lbs)		mm		(VAC)	(mm)
AT-1050C	2.2	4.9	M1 - M5	20	Overload protection circuit, reverse power prevention circuit	100 - 240	185 x 130 x 150
AT-1060C	4.8	10.6	M1 - M6	25			235 x 165 x 180

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Spring Balancer

Mount your CHP power supply onto the balancer for extra space saving.

Model	Load		Cord Length
	(kgs)	(lbs)	(m)
AT-SB12	0.5 - 1.2	1.1 - 2.6	1.6
AT-SB20	1.0 - 2.0	2.2 - 4.4	1.6
AT-SB30	2.0 - 3.0	4.4 - 6.6	1.6

Retractable balancer reduces fatigue.

Torque Cover

- Prevents tampering of torque setting
- ESD safe

Part No.	Description
AT-0001	Torque Cover for AT-2000/3000/4000/4500
AT-0002	Torque Cover for AT-6000/6500/6800
AT-0003	Torque Cover for AT-3681/5681/6681

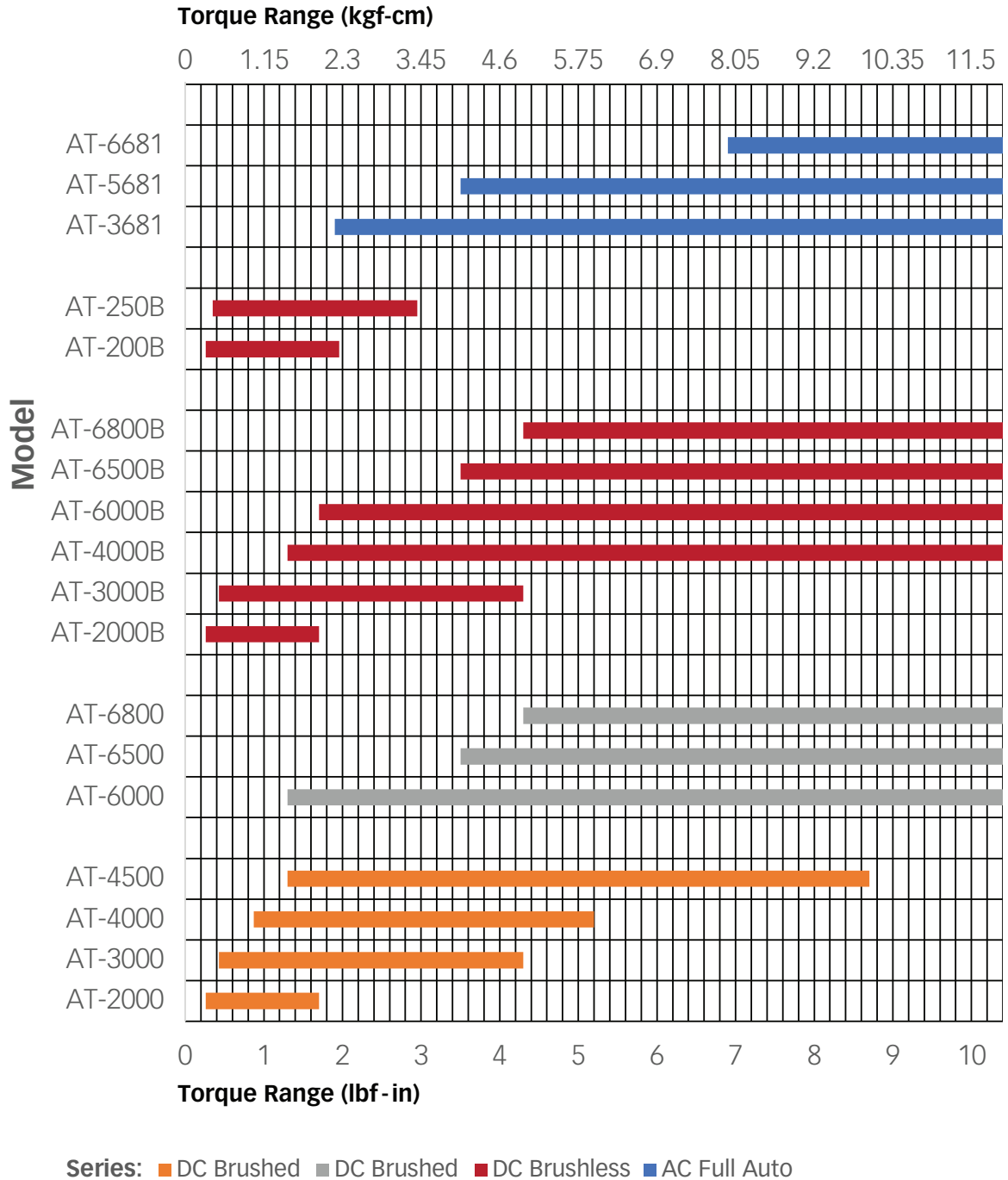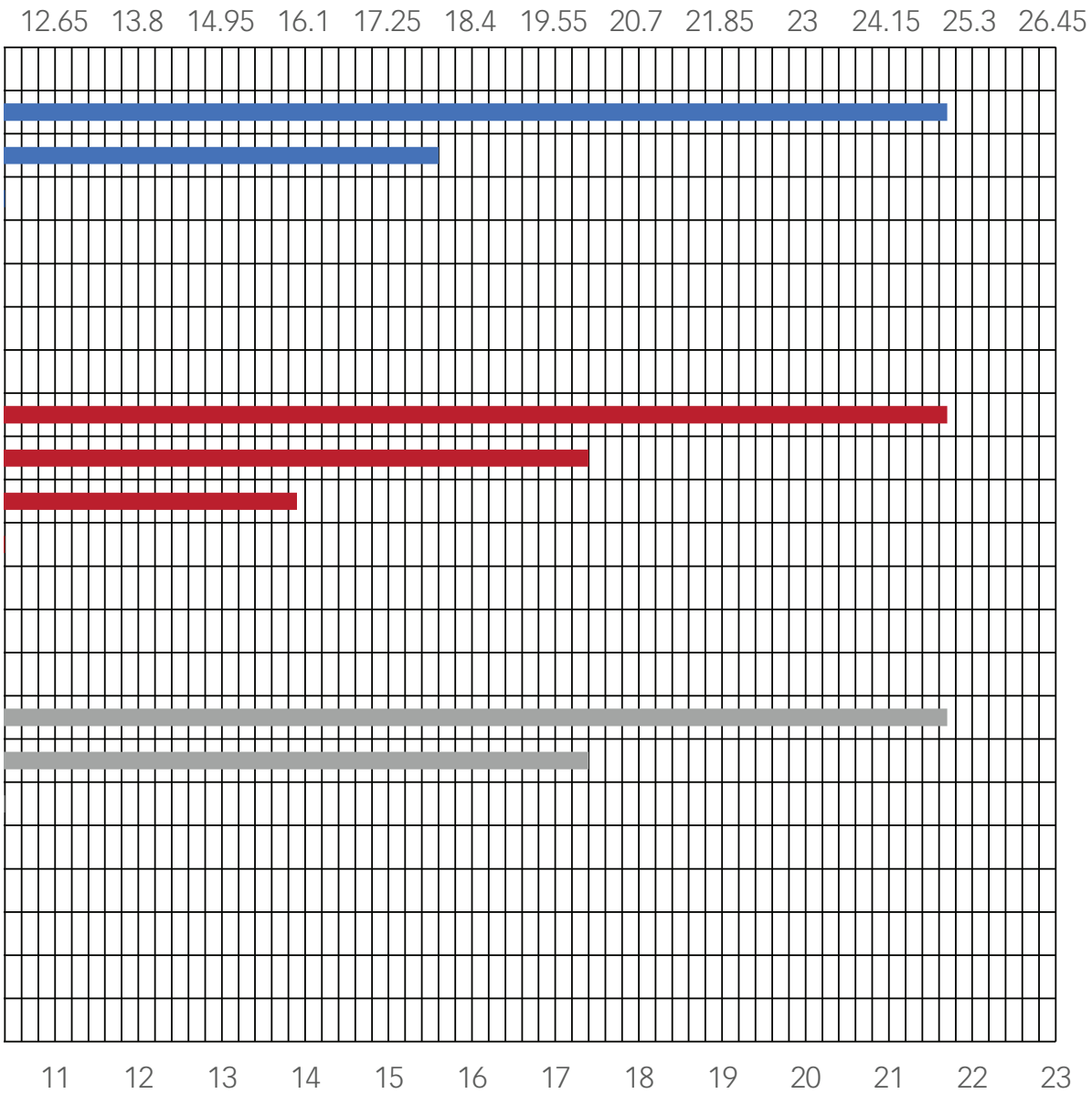## REPLACEMENT PARTS
Carbon Brushes

Keep your electronic screwdriver running with replacement carbon brushes.

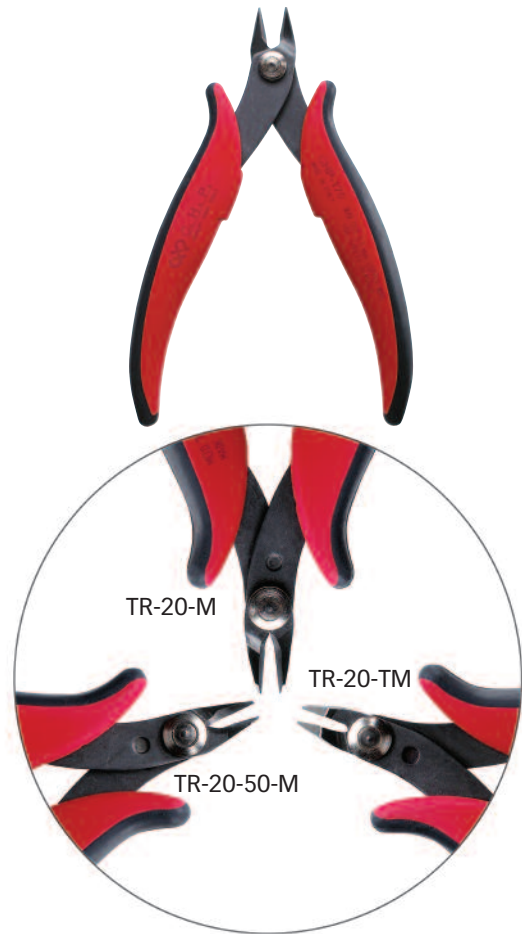| Part No.	Description
AT - 2B1018	Replacement carbon brush for AT - 4500 series
AT - 2B1016	Replacement carbon brush for AT - 6000 series
AT - 2B1014	Replacement carbon brush for CHP Direct plug - in Screwdriver

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QUALITY ASSEMBLY TOOLS

Driver Torque Chart

Torque Range (kgf-cm)

0   1.15   2.3   3.45   4.6   5.75   6.9   8.05   9.2   10.35   11.5

Model

AT-6681
AT-5681
AT-3681

AT-250B
AT-200B

AT-6800B
AT-6500B
AT-6000B
AT-4000B
AT-3000B
AT-2000B

AT-6800
AT-6500
AT-6000

AT-4500
AT-4000
AT-3000
AT-2000

0   1   2   3   4   5   6   7   8   9   10

Torque Range (lbf - in)

Series: ■ DC Brushed   ■ DC Brushed   ■ DC Brushless   ■ AC Full Auto

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QUALITY ASSEMBLY TOOLS

12.65	13.8	14.95	16.1	17.25	18.4	19.55	20.7	21.85	23	24.15	25.3	26.45

11	12	13	14	15	16	17	18	19	20	21	22	23

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QUALITY HAND TOOLS

Cutters

CHP precision cutters are sheared from 2.0-5.0 mm carbon steel and then precision ground to exacting specifications. The steel is heat treated to harden the tool for long tool life. The surfaces are parkerized to prevent glare from distracting the operator. The sharp blades and carefully matched surfaces allow accurate cutting with less force.

NOTE: Cutters with an "A" designation may be ordered with a safety clip.

Micro Cutters

Part No.	Description	Cut	Clip
TR-20-M	The small head makes this an excellent cutter for work in tight spaces. 20 AWG	Flush	A
TR-25-P	Stronger version of TR-20-M. 8 AWG max	Flush	A
TR-20-TM	Reverse cut head is angled to 48°. Special design for cutting IC leads. 22 AWG max.	Reverse	
TR-20-50-M	Same as TR-20-M but head is bent 48° to reach difficult areas. 22 AWG max cut.	Flush	

TR-20-M
TR-20-TM
TR-20-50-M

Front cutters allow work to be preformed in very dense areas. Standoff cutters cut component leads from 1.0 mm to 14 mm from the board surface.

TR-30-15
TR-5000-V
TR-5000-W
TR-5000-15
TR-30-15-V

Front & Standoff Cutters

Part No.	Description	Cut
TR-5000-W	Adjustable front cutter can set cutting height to 0-5mm. 16 AWG max cut.	Flush
TR-30-15-V	Similar to TR-30-V but cuts the component lead 1.5 mm from surface.18 AWG max.	Flush
TR-5000-V	Front cutter angled to 60° for easy access to dense areas. 16 AWG max cut.	Flush
TR-20-VM	Front cutter angled to 60° for easy access to dense areas. 22 AWG max cut.	Flush
TR-30-V	Front cutter angled to 60° for easy access to dense areas. 18 AWG max cut.	Flush
TR-5000-15	Full front center that cuts the component lead 1.5 mm. 16 AWG max cut.	Shear Flush
TR-5000-13	Full front center that cuts the component lead 1.3 mm. 16 AWG max cut.	Shear Flush
TR-5000-10	Full front center that cuts the component lead 1.0 mm. 16 AWG max cut.	Shear Flush
TR-30-15	Similar to TR-30 but cuts component 1.5 mm from surface. 16 AWG max cut.	Flush
TR-30-10	Similar to TR-30 but cuts component 1.0 mm from surface. 16 AWG max cut.	Flush

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Cutters

Macro Cutters

Part No.	Description	Cut	Clip
TRR-58-G	A Wide head & longer handles make this a very strong cutter. 10 AWG max cut.	Flush	
TRR-58	Stronger version of the TRR-58-G due to chamfered cut. 10 AWG max cut.	Chamfered	A
TRR-5000	The strongest cutter in the line. Can cut steel wire up to 10 AWG.	Chamfered	A
TR-5000-R	A strong flush cutter. 12 AWG max cut.	Flush	A
TR-5000	A stronger version of the TR-5000-R due to chamfered cut. 12 AWG max cut.	Chamfered	A
TR-5000-PR	A tapered version of the TR-5000-R. The pointed head allows access to dense areas. 16 AWG max cut.	Flush	A
TR-5000-P	Chamfered version of TR-5000-PR. 12 AWG	Chamfered	A

TRR-5000
TR-5000-R
TR-5000-PR
TRR-58-G

Medium Cutters

Part No.	Description	Cut	Clip
CHP-170	Excellent general use tool. 16 AWG max cut.	Flush	A
TR-30	Same head as CHP-170. Longer life due to thicker steel. 16 AWG max cut.	Flush	A
TR-30-58-R	Same head as CHP-170. HRC 58 extends cutter life beyond TR-30. 14 AWG max cut.	Flush	A
TR-30-58	Same as TR-30-58-R but with chamfered cut. 14 AWG max cut.	Chamfered	A
TR-25-15	Same as CHP-170 but with reverse cut. 16 AWG max cut.	Reverse	
TR-25-50	Similar head as CHP-170 but head is bent to 48°. 16 AWG max cut.	Flush	
TR-30-T	Reverse cut head is angled to 48°. Special design for cutting IC leads. 18 AWG max.	Reverse	
TR-58-R	Blunt version of TR-30-58-R for very strong cutting. 12 AWG max cut.	Flush	A
TR-58	Stronger version of TR-58-R due to chamfered cut. 12 AWG max cut.	Chamfered	A

CHP-170
TR-58-R
TR-25-50

Extractors

The extractor series is made up of tools specifically designed to perform the removal of PLCC type integrated circuits from the socket. The tool applies even force to prevent damage to the component during removal. Additional extractors are available for inserting and removing DIP components.

Extractors

Part No.	Pins
PLCC-84	84 pin PLCC extractor
PLCC-68	68 pin PLCC extractor
PLCC-52	52 pin PLCC extractor
PLCC-44	44 pin PLCC extractor
PLCC-32	32 pin PLCC extractor
PN-5032	22-32 pin DIP extractor
PN-5020	14-20 pin DIP extractor

PLCC Extractor
PLCC-84

IC Extractor
PN-5032

Pneumatic Tools

Pneumatic depaneling tools and cutters make high volume work much easier. By increasing throughput they help lower cost, reduce operator fatigue, and increase safety. The blades are made from carbon steel and are subjected to heat treatment to strengthen the blade for long life.

Pneumatic Tools

Part No.	Description
DPP-20-N	Pneumatic depaneling tool. 2.0mm wide head
DPP-23-N	Pneumatic depaneling tool. 2.3mm wide head
DPP-24-N	Pneumatic depaneling tool. 2.4mm wide head
DPP-25-N	Pneumatic depaneling tool. 2.5mm wide head
TPP-TR-6000	Pneumatic chamfered cut tool. 14 AWG max cut
TPP-TR-6000R	Pneumatic flush cut tool. 14 AWG max cut
TPP-TP-6000	Pneumatic clinch & flush cut tool. 18 AWG max cut

DEPANELING TOOL
DPP-20-N

CUTTING TOOL
TPP-TR-6000

Shears

The CHP series of shears are made up of various single and multi-use tools. All the tools in this series are made from carbon steel and are subjected to heat treatment to strengthen the tool for long life. The two parts of the tools are joined by carefully ground holes and surfaces, enabling precise movement.
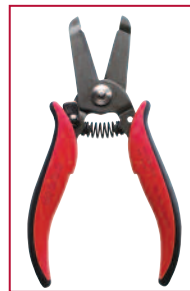
Shears

Part No.	Shear Length
CS-30	18.5 mm long shears. 16 AWG max cut.
CS-30-L	24 mm long shears 1.6 AWG max cut .
CS-30-XZ	Three function tool: Screwdriver, soldering tip removal & 5.5 mm long shears. Max cut 14 AWG.
CSP-30-GR	25 mm long angled 45° heavy-duty shear.
CSP-30-GL	35 mm long angled 45° heavy-duty shear.
CSP-30-3	40 mm long straight heavy-duty shear. Max cut 000 AWG.
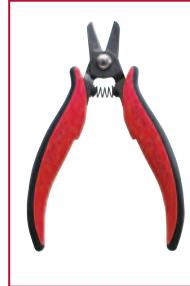
Shears
CS-30
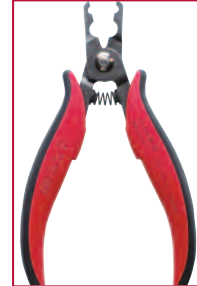
Multipurpose
Shears
CS-30-XZ

Shears/Pliers
CSP-30-3

Angled Shears
CSP-30-GR

CHP Tools

Depaneling Tools

A tool designed to remove a single PCB from a multiple circuit board panel. The shearing action will eliminate delamination of the board material. These tools are made from carbon steel and are subjected to heat treatment to strengthen the tool for long life.

Depaneling Tools

Part No.	Description
DP-15-N	1.5 mm wide head & 2.5 mm isthmus (tab) cut
DP-20-N	2.0 mm wide head & 2.5 mm isthmus (tab) cut
DP-23-N	2.3 mm wide head & 2.5 mm isthmus (tab) cut
DP-24-N	2.4 mm wide head & 2.5 mm isthmus (tab) cut
DP-25-N	2.5 mm wide head & 2.5 mm isthmus (tab) cut

Depaneling Tool
DP-25-N

Lead Forming

These tools are suitable for the pre-forming or cutting of a wide range of electronic components, combining the operations when necessary. All the tools in this series are made from carbon steel and are subjected to heat treatment to strengthen the tool for long life. Tools are available for cutting axial and radial leaded components, flatpack ICs and transistors.

PNR-5000-D
PN-5050/4
TP-30
PPR-5003
PTR-30-L-D

Lead Forming Tools

Part No.	Description
PNR-5000-D	Cuts the lead & forms a "C" shape standoff for axial & radial leaded components. Height of component from board is adjustable from 4-16 mm. Dissipative.
PNR-30-D	Forms a "C" shape standoff for axial & radial leads. Dissipative.
PTR-30-L-D	Cuts the lead & forms a "L" shape standoff for radial leaded components. Dissipative.
PPR-5001	Pre-forms axial leaded components with 90° bends, 10.16 mm pitch.
PPR-5002	Pre-forms axial leaded components with 90° bends. 12.70 mm pitch.
PPR-5003	Pre-forms axial leaded components with 90° bends, 15.24 mm pitch.
PN-5050/4	Pre-forms the side leads of T03P style package w/ 5.08 mm.
TP-30	Lead termination tool, cuts & clinches lead.
TP-5000-15-D	Lead termination tool, cuts & clinches lead 30°. Dissipative.

Wire Srippers

The CHP series of wire strippers offers a wide selection of wire stripping options. Self adjusting wire strippers and fixed, precision ground strippers are made from heat treated carbon steel. Simple pull action wire strippers combine reliability with exceptionally fast use.

Wire Strippers

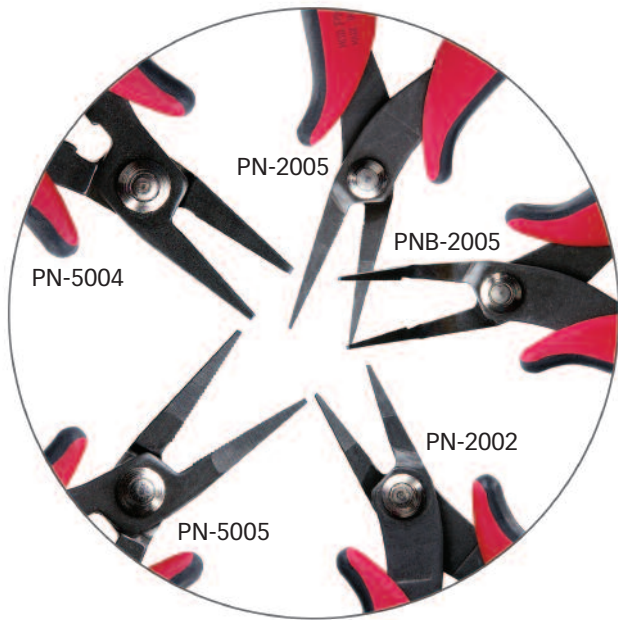| Part No.	Description
CSP-30-1	Multi-function wire stripper, shear & pliers, Strips 30-20 AWG
CSP-30-2	Multi-function wire stripper, shear & pliers, Strips 20-10 AWG
CSP-30-7	Multi-function wire stripper, shear & pliers, Strips 26-16 AWG
SF-30	Self-adjusting wire stripper, Strips 32-22 AWG
PST-0.5	Fixed pull wire stripper, Strips at 24 AWG
PST-0.6	Fixed pull wire stripper, Strips at 22 AWG
PST-0.8	Fixed pull wire stripper, Strips at 20 AWG
PST-1.0	Fixed pull wire stripper, Strips at 18 AWG
SF-40-1	Fixed wire stripper blade, Strips 30-18 AWG
SF-40-2	Fixed wire stripper blade, Strips 16-13 AWG

Adjustable Wire Stripper
SF-30

Shear/ Wire/ Stripper/ Plier
CSP-30-7

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Pliers

The CHP line has an extensive assortment of pliers for every need. The CHP pliers are sheared from carbon steel and then precision ground to exacting specifications. The steel is heat treated to harden the tool for long tool life. Pliers are available with short or long nose, straight or angled, serrated or smooth jaws, and fine or flat nose. Heavy duty pliers made from 5 mm steel are also available.

PN-2005
PNB-2005
PN-5004
PN-2002
PN-5005

Short Nose Pliers

Part No.	Description	Nose	Jaws
PN-2001	3 mm thick steel short nose pliers	Pointed	Serrated
PN-2002	3 mm thick steel short nose pliers	Pointed	Smooth
PN-2003	3 mm thick steel short nose pliers	Flat	Serrated
PN-2004	3 mm thick steel short nose pliers	Flat	Smooth

Long Nose Pliers

Part No.	Description	Nose	Jaws
PN-2005	3 mm thick steel long nose pliers	Pointed	Serrated
PN-2006	3 mm thick steel long nose pliers	Pointed	Smooth
PN-2007	3 mm thick steel long nose pliers	Flat	Serrated
PN-2008	3 mm thick steel long nose pliers	Flat	Smooth

Angled Pliers

Part No.	Description	Nose	Jaws
PNB-2005	3 mm thick steel long nose angled pliers	Pointed	Serrated
PNB-2006	3 mm thick steel long nose angled pliers	Pointed	Smooth
PNB-2007	3 mm thick steel long nose angled pliers	Flat	Serrated
PNB-2008	3 mm thick steel long nose angled pliers	Flat	Smooth

Heavy Duty Short Nose Pliers

Part No.	Description	Nose	Jaws
PN-5001	5 mm thick steel short nose pliers	Pointed	Serrated
PN-5002	5 mm thick steel short nose pliers	Pointed	Smooth
PN-5003	5 mm thick steel short nose pliers	Flat	Serrated
PN-5004	5 mm thick steel short nose pliers	Flat	Smooth

Heavy Duty Long Nose Pliers

Part No.	Description	Nose	Jaws
PN-5005	5 mm thick steel long nose pliers	Pointed	Serrated
PN-5006	5 mm thick steel long nose pliers	Pointed	Smooth
PN-5007	5 mm thick steel long nose pliers	Flat	Serrated
PN-5008	5 mm thick steel long nose pliers	Flat	Smooth

CHP Tools

Specialty Pliers

Micro and thin pliers are available for working with delicate parts and access to the most narrow and dense areas. Round nose pliers form components without damaging the lead. The combination pliers function as shears and pliers.

Speciality Pliers

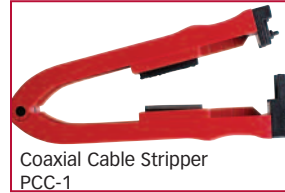| Part No.	Description	Nose	Jaws
PN-20-M	Thin, short pliers for delicate work	Pointed	Smooth
PN-2002-M	Thin, long pliers for delicate work	Pointed	Smooth
PN-2002-PM	Thin, long pliers for delicate work	Pointed	Smooth
PN-5028	One flat jaw & one rounded jaw	Round	Smooth
PN-5025	Round nose plier	Round	Smooth
CS-30-X	Combination tool. pliers & shears	Flat	Serrated

PN-20-M
PN-2002-PM
PN-2002-M
PN-5025
CS-30-X
PN-5028

Cable Strippers

The series of cable stripping tools will strip small coaxial cables (5-6 mm) and round cables with diameters between 4 and 50 mm. The cable strippers are fitted with an adjustable internal blade for an accurate cutting depth. A simple twist and pull action strips the sleeve and allows for easy removal.

Coaxial Cable Stripper
PCC-1

Cable Stripper
SC-1/S

Cable Strippers

Part No.	Description
PCC-1	Co-axial cable strips outer & inner insulation, Strips 5-6 mm cable.
SC-1/S	Cable stripper with adjustable internal blade, Strips 4-16 mm cable.
SC-2/S	Cable stripper with adjustable internal blade, Strips 8-28 mm cable.
SC-5/ST	Cable stripper with adjustable internal blade, Strips 28-35 mm cable.
SC-6/ST	Cable stripper with adjustable internal blade, Strips 35-50 mm cable.
SC-3/1C	Cable stripper with adjustable internal blade & external single sided blade, Strips 8-28 mm cable.
SC-4/2C	Cable stripper with adjustable internal blade & external single sided blade with hook, Strips 8-28 mm cable.

Cable Stripper w/Blade
SC-3/1C

Cable Stripper
w/hook Blade
SC-4/2C

Screwdrivers

The CHP screwdrivers feature ergonomic handles with a tapered soft grip for operator comfort. A rotating cap at the fingertip allows for better control and quick fastening. Available in standard and ESD safe grips with Slog, Phillips and Torx tips.

SLOT

PHILLIPS

TORX

Screwdrivers

Part No.	Description
PG1-3	Slot tip, 2.5 x 75mm
PG1-4	Slot tip, 3.0 x 100mm
PG1-5	Slot tip, 3.0 x 150mm

Part No.	Description
PG2-1	Phillips #00, 2.5 x 60mm
PG2-2	Phillips #0, 3.0 x 60mm
PG4-0	Torx tip T6 x 50mm

1-800-88-HAKKO

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Tweezers

Each CHP precision tweezer is manufactured with high quality stainless, non-magnetic, antacid steels in a wide variety of tip shapes. Ideal for delicate, precision assembly.

CHP Tools

TWEEZERS

Part No.	Description
0-SA	Fine point tweezer, general purpose electronic tweezer, 120 mm
00B-SA	Fine point tweezer with serrated grip, 120 mm
00D-SA	Fine point tweezer with serrated grip and tip, 120 mm
00-SA	Fine point tweezer, stronger than 0-SA, 120 mm
0C11-SA	Fine point tweezer, smaller than 0-SA, 110 mm
1-SA	Sharp point tweezer, long taper, 120 mm
2-SA	Fine point thin tapered tweezer, 118 mm
2A-SA	Round point tweezer, 120 mm
2AB-SA	Round point curved tweezer, 118 mm
3-SA	Very fine point tweezer 120 mm
3C-SA	Very fine point tweezer 110 mm
4-SA	Very fine point tapered tweezer, 110 mm
4A-SA	Very fine point tweezer 110 mm
5-SA	Very fine point thin tapered tweezer, 110 mm
5A-SA	Very fine point thin tapered tweezer with tips offset, 115 mm
5B-SA	Very fine point thin tapered bent tweezer 110 mm
5C-SA	Similar to 5B-SA but with tips offset, 115 mm
7-SA	Very fine point curved tweezer, 118 mm
7A-SA	Fine point curved tweezer,118 mm
7E-SA	Flat point curved tweezer,118 mm
19-SA	Fine point tweezer with inside tip serrations and finger serrations, 160 mm
26-SA	Very fine point tweezer
38-SA	Fine point tweezer with center groove for holding 1 mm and larger round components and wires 115 mm
51-S-SA	Very fine point curved tweezer
65A-SA	Very fine point curved tweezer, 134 mm
102-SA	Flat tip tweezer 2.5 mm wide, tips are angled to 45º to easily handle chip components, 120 mm

| Part No.	Description
103-SA	Flat tip tweezer 1 mm wide, for handling SOT packages horizontally, 120 mm
104-SA	Flat tip tweezer 2.5 mm wide, for handling SOT packages vertically, 120 mm
105-SA	Flat tip curved tweezer 2.5 mm wide, for handling SOT packages, 118 mm
106-SA	Wide flat tip curved tweezer, 120 mm
107-SA	Flat tip tweezer 1.5 mm wide, tips are angled to 45º to easily handle chip components, 120 mm
108-SA	Flat tip tweezer 3.5 mm wide, for handling SOT packages horizontally, 120 mm
109-SA	Wide flat tip curved tweezer. Similar to 106-SA but with wider tip, 120 mm
110-SA	Flat tip tweezer, tip is angled to almost 90º to handle chip components, 120 mm
111-SA	Flat tip tweezer 1.5 mm wide, 120 mm
231-SA	Fine point tweezer, with inside tip serrations, general purpose electronic tweezer, 120mm
232-SA	Round point tweezer with finger serrations, 150 mm
233-SA	Round point tweezer with inside tip serrations and finger serrations, 160 mm
321-SA	Round flat tweezer, 122 mm
578-SA	Component handling tweezer, 120 mm
A-SA	Fine point tweezer, 115 mm
AA-SA	Fine point thin tapered tweezer, 125 mm
F-SA	Flat point tweezer, 115 mm
SA-SA	Very fine point thin tapered tweezer, 118 mm
SS-SA	Very fine point thin tapered tweezer, 140 mm

Heel Grounder

Part No.	Description
SC-0901	Large Cup Heel Grounder
SC-0902	Standard Cup Heel Grounder
	Specifications
	• Includes 1meg resistor
	• 14 in. Hook & Loop Strap with D-ring
	• 2-layer rubber construction
	• 1.5 in. wide contact patch
	• $< 3.5 \times 10^7$ ohms

Durable cup type heel grounder made with 2-layer non-marking rubber. D-ring fastening with a hook and loop strap in CHP Red for easy identification in the work area. This heel grounder includes a 1 meg resistor and a 22-inch long grounding ribbon.

Finger Cots

Part No.	Description
SC-0701	Pink Latex Finger Cots, Small, 5 Gross
SC-0702	Pink Latex Finger Cots, Medium, 5 Gross
SC-0703	Pink Latex Finger Cots, Large, 5 Gross
	Specifications
	• $< 10^{10}$ Ω/sq Resistance
	• 3.5~4 mil Thickness
	• Tribocharge < 20V
	• Packaged in 5 Gross bags
	(720/bag)
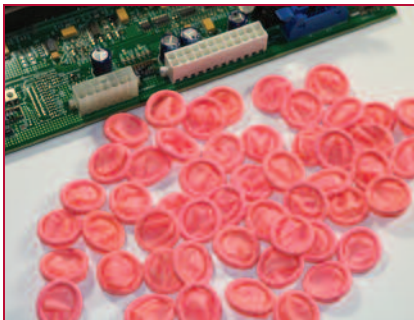
Pink anti-static finger cots are commonly used in electronics assembly, photonics, pharmaceutical, and medical manufacturing. Made from 100% pink latex and are powder free.

Available sizes: Small, Medium, Large

*For additional sizes, call for availability.

HakkoUSA.com

Gloves

Part No.	Description
SC-0705	Palm Coated, Small
SC-0706	Palm Coated, Medium
SC-0707	Palm Coated, Large
SC-0708	Palm Coated, X-Large
SC-0709	Palm Coated, 2X-Large
SC-0710	Finger Tip Coated, Small
SC-0711	Finger Tip Coated, Medium
SC-0712	Finger Tip Coated, Large
SC-0713	Finger Tip Coated, X-Large
SC-0714	Finger Tip Coated, 2X-Large
SC-0715	Uncoated, Small
SC-0716	Uncoated, Medium
SC-0717	Uncoated, Large
SC-0718	Uncoated, X-Large
SC-0719	Uncoated, 2X-Large
	Specifications
	• $< 10^8$ Ω/sq Resistance (EN1149 Part 1)
	• Knit nylon with carbon fiber
	• Seamless
	• Machine washable and reusable – No effect on ESD performance
	• Uniform resistivity throughout the glove
	• Meets EU Standard PPE (EN388)

Comfortable low-lint seamless knit nylon with carbon fiber to reduce charge generation but maintain your sense of feeling as you handle ESD sensitive items. Light weight, stretchable, and breathable provide a perfect fit and comfort for all day wear. CHP Inspection Gloves are available as uncoated, or with a durable non-slip polyurethane coating on the finger tips or the entire palm.

Available sizes: Small, Medium, Large, X-Large, and 2X-Large

Wrist Strap

Part No.	Description
SC-0807	Wrist Strap with 10ft cord
	Specifications
	• Includes 1meg resistor
	• 4 mm snap size
	• 10-foot coil cord
	• Hypoallergenic elastic wrist band
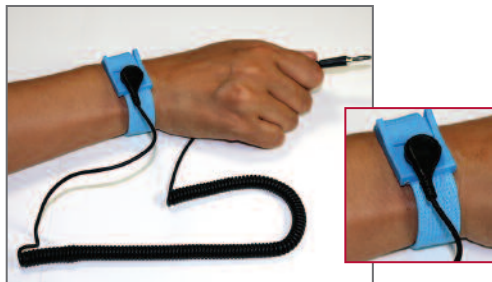
Effective for personal grounding. The CHP Wrist Strap uses a medical grade stainless steel back plate and a conductive woven thread in a hypoallergenic elastic fabric band that is comfortable to wear. The wrist strap comes with a 10-foot coil cord that has a 4 mm snap connection for the wrist strap, and a standard banana plug termination and alligator clip adapter.

***For additional sizes, call for availability.**

Static Control

Static Shield Bags

Part No.	Description
SC-0301	Open Top Bag, 2 x 4in.
SC-0302	Open Top Bag, 2 x 3in.
SC-0303	Open Top Bag, 2 x 6in.
SC-0304	Open Top Bag, 3 x 5in.
SC-0305	Open Top Bag, 4 x 4in.
SC-0306	Open Top Bag, 4 x 6in.
SC-0307	Open Top Bag, 4 x 12in.
SC-0308	Open Top Bag, 4 x 16in.
SC-0309	Open Top Bag, 4 x 30in.
SC-0310	Open Top Bag, 5 x 8in.
SC-0311	Open Top Bag, 6 x 6in.
SC-0312	Open Top Bag, 6 x 8in.
SC-0313	Open Top Bag, 6 x 10in.
SC-0314	Open Top Bag, 6 x 12in.
SC-0315	Open Top Bag, 6 x 16in.
SC-0316	Open Top Bag, 6 x 24in.
SC-0317	Open Top Bag, 8 x 10in.
SC-0318	Open Top Bag, 8 x 12in.
SC-0319	Open Top Bag, 8 x 16in.
SC-0321	Open Top Bag, 8 x 24in.
SC-0322	Open Top Bag, 10 x 12in.
SC-0326	Open Top Bag, 10 x 24in.
SC-0329	Open Top Bag, 12 x 16in.
SC-0330	Open Top Bag, 12 x 18in.
SC-0331	Open Top Bag, 12 x 24in.
SC-0332	Open Top Bag, 14 x 18in.
SC-0339	Open Top Bag, 16 x 24in.
SC-0340	Open Top Bag, 18 x 24in.
	Specifications
	• PET/Al/PE construction
	• 3.0 mils total thickness (Nominal)
	• Printed with ESD Protective Symbol and Lot C
	• Open Top design
	• Meets ANSI/ESD S20.20
	and ANSI/ESD S541 requirements
	• 100 bags/pack
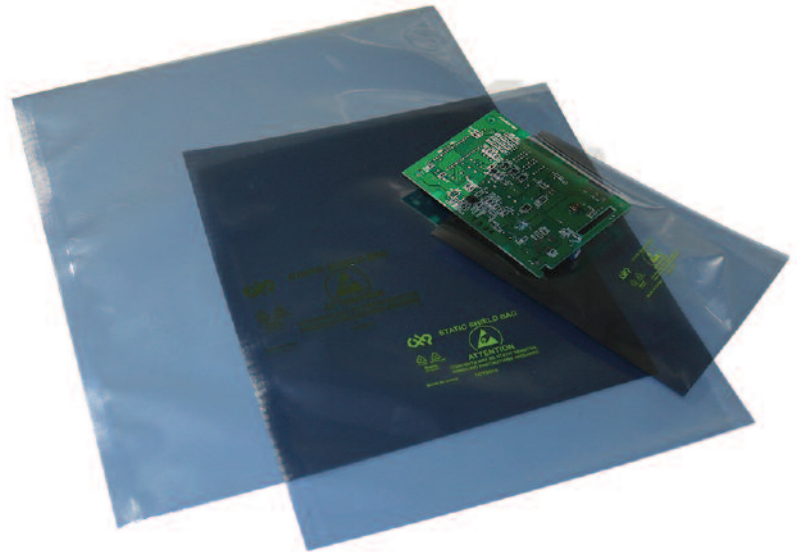
Durable and high quality metal-in static shield bags feature a three-layer construction which acts as a Faraday cage to protect sensitive electronic assemblies from static fields and charges during production, storage, and shipping. Bags are heat sealable and RoHS/REACH compliant.

CHP Static Shield bags do not accumulate charge and meet or exceed ESD industry standards.

Available in common sizes listed.

Static Control

HakkoUSA.com

Static Shield Grid Tape

Anti-static tape with a conductive grid ideal for use in ESD sensitive areas. The conductive grid provides a Faraday cage for EMI and ESD shielding and ensures the electrical integrity of zip-top and open top static shield bag closures.

Part No.	Description
SC-0601	2.0 mils x 0.5in x 36yd
SC-0604	2.0 mils x 0.75in x 36yd
	Specifications
	• 2.0 mils Total Thickness
	• Aluminum-metalized PET film
	• < 50V Removal from Roll
	• 3-inch White Plastic Core
	• 36-yd/roll

Available widths: 1/2, 3/4

*For additional sizes, call for availability.

ESD Labels

Standard ESD awareness pressure sensitive label with large bold black print on a bright yellow background. Includes the standard JEDC symbol.

Part No.	Description
SC-0603	2.5 x 1in. ESD Label x 500/roll
	Specifications
	• Bright semi-gloss finish
	• Scuff resistant
	• 500 labels/roll

*For additional sizes, call for availability.

Static Control

Access the digital catalog at **HakkoUSA.com**   **1-800-88-HAKKO**

Polyimide Tape

Part No.	Description
SC-0402	2.5 mils x 0.25in. x 36yd
SC-0403	2.5 mils x 0.375in. x 36yd
SC-0404	2.5 mils x 0.5in. x 36yd
SC-0405	2.5 mils x 0.625in. x 36yd
SC-0406	2.5 mils x 0.75in. x 36yd
SC-0407	2.5 mils x 1in. x 36yd
	Specifications
	• 1.0 mil Film Thickness
	• 2.5 mils Total Thickness
	• 500°F Max Temperature
	• 3-inch White Plastic Core w/Lot ID
	• 36-yd roll

Available widths: 1/4, 3/8, 1/2, 5/8, 3/4, 1 inch

*For additional sizes, call for availability.

Electrical grade Polyimide with pre-cured pressure sensitive silicone adhesive film designed to operate at high temperatures and provide clean removal with no residue. Ideal for use during powder coating, wave soldering, and PCB production processes.

Low Static Polyimide Tape

Part No.	Description
SC-0412	2.7 mils x 0.25in. x 36yd
SC-0414	2.7 mils x 0.5in. x 36yd
SC-0416	2.7 mils x 0.75in. x 36yd
SC-0417	2.7 mils x 1in. x 36yd
	Specifications
	• < 50V Removal from Roll
	• 1.0 mil Film Thickness
	• 2.7 mils Total Thickness
	• 500°F Max Temperature
	• 3-inch Pink Plastic Core w/Lot ID
	• 36-yd roll

Available widths:
1/4, 1/2, 3/4, 1 inch

*For additional sizes, call for availability.

Electrical grade Polyimide with anti-static treatment and pre-cured pressure sensitive silicone adhesive film designed to operate at high temperatures and provide clean removal with no residue. Anti-static treatment minimizes static generation when peeling.

Static Control

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Anti-static Tape

Biodegradable transparent cellulose tape that is static free with a natural rubber adhesive. Tape has the ESD symbol printed on the tape.

Part No.	Description
SC-0602	2.0 mils x 0.5in x 36yd
	Specifications
	• 2.0 mils Total Thickness
	• 150°F Maximum Temperature
	• 3-inch White Plastic Core
	• 36-yd/roll

*For additional sizes, call for availability.

Polyimide Discs

Electrical grade Polyimide pre-cut discs with pre-cured pressure sensitive silicone adhesive film designed to operate at high temperatures and provide clean removal with no residue. Ideal for use during powder coating, wave soldering, and PCB production processes.

Part No.	Description
SC-0501	2.5 mils x 0.25in ø x 2000 pcs
SC-0502	2.5 mils x 0.375in ø x 2000 pcs
SC-0503	2.5 mils x 0.5in ø x 2000 pcs
	Specifications
	• 1.0 mil Film Thickness
	• 2.5 mils Total Thickness
	• 500°F Max Temperature
	• 3-inch White Plastic Core w/Lot ID
	• 2,000 discs/roll

Available diameters: 1/4, 3/8, 1/2 inch

*For additional sizes, call for availability.

Static Control