

CHPTools.com

Sales and Service by HAKKO® American Hakko Products, Inc.

TABLE OF CONTENTS

C ▲ H ▲ P ▲
QUALITY ASSEMBLY TOOLS

- **DPF-300** PCB Depaneling System 3
- **ATX Intelligent Torque Drivers** ATX 12, 30 & 50 4
- **ATX Controllers** Single & Dual-Port Intelligent Torque Controllers 5
- **Torque Driver Chart** 6-7
- **Electric Torque Screwdrivers** Brushless **Standard Series** 8
- **Electric Torque Screwdrivers** Brushless **Mini Series** 8
- **Electric Torque Screwdrivers** Brush **AT-4500 Series** 9
- **Electric Torque Screwdrivers** Brush **AT-6000 Series** 9
- **Power Supply** Standard / Error-Proofing 10
- **Electric Torque Screwdrivers** Brush **Direct Plug-In Series** 11

Accessories

- **Carbon Brushes** 11
- **Torque Cover** 11
- **Right Angle Head** 12
- **Spring Balancer** 12
- **Torque Meter** 13
- **Screw Feeder** 13

C ▲ H ▲ P ▲
QUALITY HAND TOOLS

- **Cutters** Standard & ESD Safe 14
- **Lead Forming** 15
- **Shears** Standard 15
- **Depaneling Tools** 16
- **Wire & Cable Strippers** Standard & ESD Safe 16
- **Pliers** Standard & ESD Safe 17
- **Specialty Pliers** Standard 17
- **Screwdrivers** 18
- **Extractors** 18
- **Tweezers** 19

DPF-300

PCB DEPANELING SYSTEM

The **DPF-300** is a manual router table for depaneling PCBs from a panel or multiblock. A portable depaneling system providing the same performance and quality of a high-end router machine, with no programming required, at a fraction of the cost compared to other machines.

Safety

The shape of the interchangeable guide rail (PATENTED) assists the operator to safely place and maneuver the PCBs until the cut is completed. This prevents damage to the PCB should the operator insert the wrong size guide rail that does not match perfectly with the geometry and size of the panel slot.

Vacuum & Filter System

A powerful vacuum system is mounted directly under the table top, and a vacuum hose connected at the guide rail removes the PCB dust at the source for a clean and healthy work environment.

The fine dust particles are collected by a polyester filter cartridge that is easy to access and clean.



SPECIFICATIONS

Power Consumption	1 kW
Voltage	115V / 60Hz
Weight	161 lb. / 73 kg
Decibels	80 dB(A) ± 3 dB(A)
Motor Spindle Power	0.27 kW
Micro-spindle Speed	24,000 RPM Max.
Dimensions (W x H x D)	25 x 28 x 37 in. / 64 x 70 x 95 cm
PCB Characteristics	
Thickness	Max. 4 mm
Slot Length	Min. 11 mm
Slot Width	1.5 - 2.5 mm
PCB Material	FR4 / CCL / CEM / Aluminum*

* For aluminum depaneling, contact American Hakko Products, Inc. for the milling bit specifications.



Guides

Standard 1.5 - 2.5 mm sizes & custom sizes also available upon request



Milling Bits

Standard 1.5 - 2.5 mm sizes & custom sizes also available upon request

Note: Guides and milling bits are sold separately. Find more information about these components on HakkoUSA.com.

ATX Intelligent Torque Drivers

ATX 12, 30 & 50

The latest tools from CHP are the **ATX 12, 30 & 50 Intelligent Torque Drivers.** These premium non-slip grip drivers work with the ATX Intelligent Torque Controller to calculate torque and angle. These transducer drivers have an LED status indicator ring, use a 1/4" hex bit, a torque range of 2.4 to 50 (kgf-cm) with a max speed of up to 2000 rpm.

The drivers feature an ergonomic grip design that is lightweight and ESD safe for electronics assembly. The drivers also feature an integrated, intensity-adjustable white LED work light, user-defined status indicator light, easy to operate rotation direction selector, and a user-programmable trigger system that allows you to define the trigger type as push, lever, or both and also define the start and stop sensitivity.



SPECIFICATIONS

Model	ATX-12	ATX-30	ATX-50
Torque Range	2.08 - 10.41 lbf-in. / 2.4 - 12 kgf-cm	5.20 - 26.03 lbf-in. / 6.0 - 30 kgf-cm	8.67 - 43.39 lbf-in. / 10 - 50 kgf-cm
Max Speed (RPM)	2000	1200	700
Torque Precision	< ±3%		
Tool Bit Shank	0.25 in. / 6.35 mm Hex		
Tool Bits Included (50 mm Length)	Phillips #1 - 3.0 mm ø Phillips #2 - 4.5 mm ø	Phillips #2 - 4.5 mm ø Phillips #2 - 6.0 mm ø	2 pcs Phillips #2 - 6.0 mm ø
Grip Diameter	1.34 in. / 34 mm		
Trigger Type	User-Programmable Push / Lever / Both		
Work Light	Integrated White LED - User-Programmable Intensity		
Status Indicator	User-Programmable Yellow / Red / Green		
Dimensions (W x D x H)	1.61 x 1.57 x 10.71 in. / 41 x 40 x 272 mm		
Weight	16.9 oz. / 480 g		

ATX Controllers

SINGLE & DUAL-PORT INTELLIGENT TORQUE CONTROLLERS

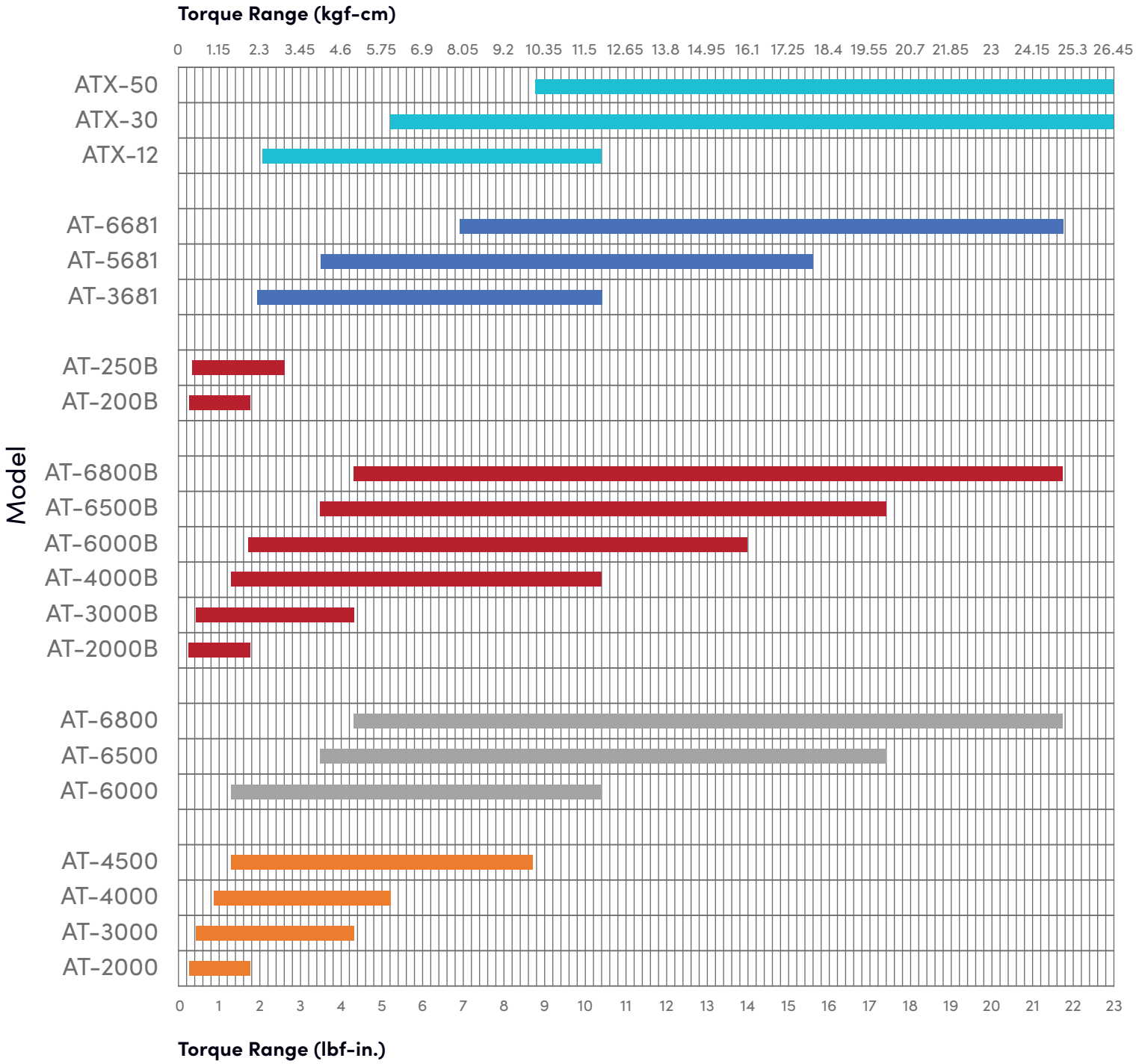
The **ATX-P1 & ATX-P2 Single & Dual Port Intelligent Torque Controllers** are a 10-inch LCD touchscreen controller for the CHP ATX-12, 30, and 50 electric torque drivers. The controller is LED backlit and is available in a 1 or 2 port model for powering and controlling the ATX torque drivers. The large touchscreen interface allows the user to easily adjust the settings on the torque drivers for superior torque control.



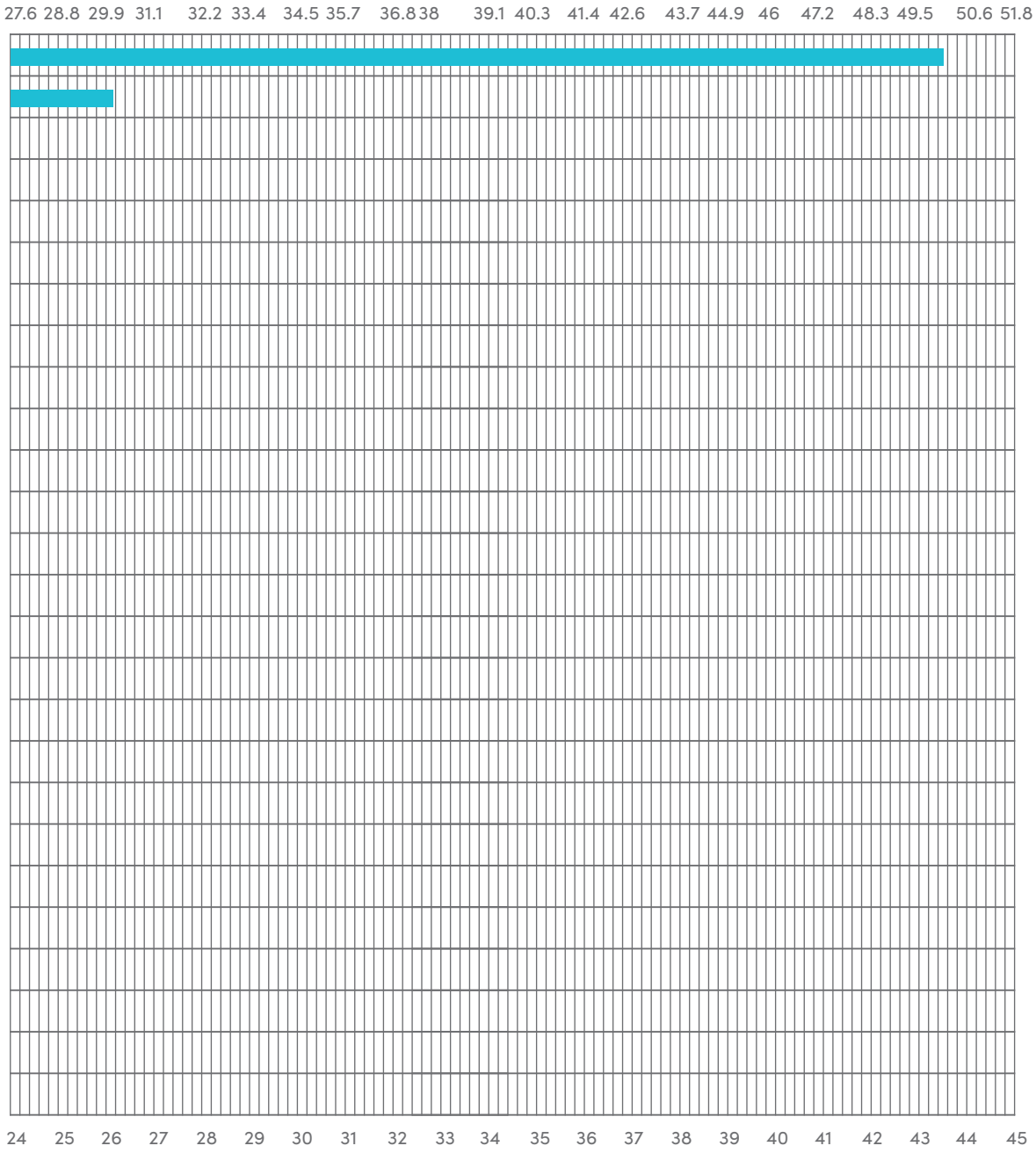
SPECIFICATIONS

Model	ATX	
Part No.	ATX-P1	ATX-P2
Supported No. of Screwdrivers	1	2
Input Voltage	100 to 240 VAC 50 / 60 Hz	
Power Consumption	100 W	200 W
Output Voltage	38 VDC	
Continous Output Current (RMS)	3.7 A / Screwdriver	
Max Instantaneous Output Current (RMS)	15.0 A / Screwdriver	
Display	10.1 in. TFT LCD Touchscreen	
Resolution	800 x 1280 24-bit RGB	
Network Interface	1 port RJ-45 10 / 100 Mbps Auto-Detect	
Serial Interface	1 port RS-232	
	2 port RS-485	
HDMI Output	1 port HDMI 1.4a	
USB Host	1 port USB 2.0	
Digital Input / Output (Per Tool)	8 - Digital Outputs (150 mA max.) 8- Digital Inputs (30 VDC max.)	
Fastener Definitions	500 max.	
Fastener Sequence Definitions	500 max.	
Dimensions (W x D x H)	7.9 x 4.8 x 9.9 in. / 200 x 121.1 x 251.5 mm	
Weight	8.9 lb. / 4.02 kg	9.1 lb. / 4.11 kg
Operating Environment	-32 to 104 °F / 0 to 40 °C	
Enclosure Rating	IP20	

TORQUE DRIVER CHART



Series: DC Brushed DC Brushed DC Brushless Brush Direct Plug-in ATX


27.6 28.8 29.9 31.1 32.2 33.4 34.5 35.7 36.8 38 39.1 40.3 41.4 42.6 43.7 44.9 46 47.2 48.3 49.5 50.6 51.8
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

Electric Torque Screwdrivers

BRUSHLESS

STANDARD SERIES

The ideal solution for your assembly process, brushless screwdrivers eliminate 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



AT-6500B

STANDARD SERIES SPECIFICATIONS

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 Drive Type: 1/4 Hex Length: 229 mm / 9.0 in. Weight: 0.91 lb.
AT-3000B	0.43 - 4.3	0.5 - 5.0	1000	700	
AT-4000B	1.3 - 10.4	1.5 - 12.0	1000	700	
AT-4000FB	1.3 - 10.4	1.5 - 12.0	2000	1400	
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	750	500	

MINI SERIES

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

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



AT-250B

MINI SERIES SPECIFICATIONS

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 Drive Type: 4 mm Length: 200 mm / 7.8 in. Weight: 0.75 lb.
AT-250B	0.35 - 2.6	0.4 - 3.0	700	450	

CONTENTS | SCREWDRIVER + POWER SUPPLY KIT

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	# 00 x 1.7	# 0 x 2.5	# 1 x 3.0	# 1 x 3.0	# 1 x 3.0	# 1 x 3.0	# 1 x 4.5	# 00 x 1.7	# 0 x 2.0
	# 00 x 2.0	# 1 x 4.5	# 2 x 4.5	# 2 x 4.5	# 2 x 6.0	# 2 x 6.0	# 2 x 6.0	# 0 x 2.0	# 1 x 3.0
Common	Connecting Cable (P/N: AT-2W2122-2) Torque Cover (Installed on Driver) RPM Adjustment Tool (P/N: AT-6R3017)			2 Pin Terminal Connector (P/N: AT-2T6011) 4 Pin Terminal Connector (P/N: AT-2T6012) Color Bands		Power Cord (P/N: AT-2W1024)			

CONTENTS | SCREWDRIVER + POWER SUPPLY + SPRING BALANCER KIT

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)								

Electric Torque Screwdrivers

BRUSH

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 SPECIFICATIONS

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 Drive Type: 1/4 Hex Length: 217 mm / 8.5 in. Weight: 0.83 lb.
AT-3000	0.43 - 4.3	0.5 - 5.0	700	450	
AT-4000	0.87 - 5.2	1.0 - 6.0	700	450	
AT-4500	1.3 - 8.7	1.5 - 10.0	700	450	

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 SPECIFICATIONS

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 Drive Type: 1/4 Hex Length: 228 mm / 9.0 in. Weight: 1.1 lb.
AT-6500	3.5 - 17.4	4.0 - 20.0	850	550	
AT-6800	4.3 - 21.7	5.0 - 25.0	700	450	

CONTENTS | SCREWDRIVER + POWER SUPPLY KIT

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	# 00 x 1.7	# 0 x 2.5	# 0 x 2.5	# 1 x 3.0	# 1 x 3.0	# 1 x 3.0	# 1 x 4.5
	# 00 x 2.0	# 1 x 4.5	# 1 x 4.5	# 2 x 4.5	# 2 x 4.5	# 2 x 6.0	# 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) Hex Wrench Color Bands				Connecting Cable (P/N: AT-2W2133-1) 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)		

CONTENTS | SCREWDRIVER + POWER SUPPLY + SPRING BALANCER KIT

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)						

Power Supply

STANDARD

The **CHP Universal Power Adapter** works with a variety of our electric torque screwdrivers.



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

SPECIFICATIONS

Item / Model	APS-301A	APS-351B	APM-301A	APM-301C
Output Voltage	20 - 30 V	25 - 35 V	20 - 30 V	20 - 30 V
Input Voltage	100 - 240 V			
Power Consumption	60 W	59.5 W	75 W	75 W
Dimensions	164 x 64 x 42 mm		172 x 84 x 46 mm	
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

ERROR-PROOFING

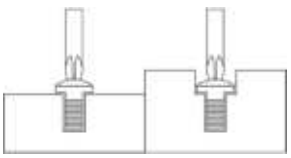
The **CHP Digital Management System Power Supply** not only powers your driver, but helps you monitor your screw assembly application process.

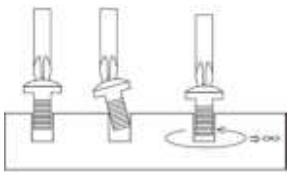
- Monitor assembly process
- Ensure proper installation
- Multiple profile settings
- External control terminals

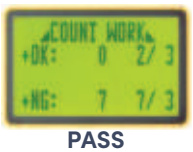


SPECIFICATIONS

Item / Model	AM-30	AM-45	AM-85
Output Voltage	20 - 30 V	25 - 35 V	20 - 30 V
Input Voltage	100 - 240 V		
Power Consumption	75 W	70 W	75 W
Dimensions	172 x 84 x 61 mm		
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







PASS

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



No Good

Electric Torque Screwdrivers

DIRECT PLUG-IN SERIES

CHP Brush Type Direct Plug-In Electric Screwdrivers feature large side windows for easy access and fast replacement of carbon brushes.

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



AT-5681

DIRECT PLUG-IN SERIES SPECIFICATIONS

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

CONTENTS | SCREWDRIVER + POWER SUPPLY KIT

Model	AT-3681	AT-5681	AT-6681
Bit	# 1 x 3.0	# 1 x 3.0	# 2 x 4.5
	# 2 x 4.5	# 2 x 6.0	# 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)		

Accessories

CARBON BRUSHES

Keep your electric screwdriver running with replacement carbon brushes.

SPECIFICATIONS

Part No.	Description
AT-2B1018	Replacement carbon brush for AT - 2000 / 3000 / 4000 / 4500 Series
AT-2B1016	Replacement carbon brush for AT - 6000 / 6500 / 6800 Series
AT-2B1014	Replacement carbon brush for Direct Plug-in Screwdriver AT - 3681 / 5681 / 6681



TORQUE COVER

The **CHP Torque Cover** is an optional accessory that allows for locking your torque driver setting to prevent tampering of torque settings. ESD safe.

SPECIFICATIONS

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
AT-0004	Torque Cover for AT-2000B to AT-6800B
AT-0005	Torque Cover for AT-200B / AT-250B



Accessories

RIGHT ANGLE HEAD

The right angle head allows the driver bit to be inserted perpendicular to the driver for areas that are difficult to reach.



SPECIFICATIONS

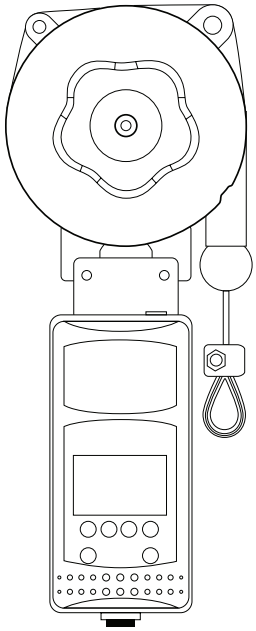
Part No.	Description
AT-4A9121	Head, Right Angle, AT-2000 / 3000 / 4000 / 4500
AT-4A9123	Head, Right Angle, AT-6000 / 6500 / 6800
AT-4A9125	Head, Right Angle, AT-2000B to AT-6800B

SPRING BALANCER

Mount your CHP power supply units onto the balancer for extra space on your assembly station.

- Retractable balancer reduces fatigue
- Reduces clutter on assembly station





SPECIFICATIONS

Model	Load		Cord Length
	(kg)	(lb.)	(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

Accessories

TORQUE METER

The **CHP Torque Meter** is a measuring unit to compliment our torque drivers as it measures and validates your torque settings on your electric screwdrivers.

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



SPECIFICATIONS

Model	Standard Measuring Range		Accuracy	Measuring Direction	Power Source	Dimension	Weight
	(lbf.in.)	(kgf.cm)				(mm)	(kg / lb.)
AP-02	0.02 - 1.73	0.03 - 2.00	± 0.5% (199 or less ± 1 digit)	Clockwise and counter clockwise	Ni-MH battery	230 x 120 x 60	2.0 / 4.4
AP-10	0.13 - 8.68	0.15 - 10.0					
AP-50	0.6 - 43.4	0.7 - 50.0					
AP-100	1.3 - 86.8	1.5 - 100.0					
AP-300	6 - 260	7 - 300					

SCREW FEEDER

The **CHP Screw Feeder** automatically feeds screws in the upright position for easy and fast pick up.

- 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
	(kg)	(lb.)		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
	(kg)	(lb.)		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

Cutters

STANDARD & ESD SAFE


CHP-170

CHP Precision Cutters are stamped from 2.0 - 5.0 mm carbon steel and then precision ground to exact specifications. The steel is heat treated to harden the tool for longer 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.


TR-25-50


TR-58


TR-20-M


TR-20-50-M

MICRO CUTTERS SPECIFICATIONS

Part No.	Description	Cut	Clip	Handle
TR-20-M	The small head makes this an excellent cutter for work in tight spaces. 20 AWG max cut.	Flush	-A	-D
TR-20-50-M	Same as TR-20-M but head is bent 50° to reach difficult areas. 22 AWG max cut.	Flush	-A	-D
TR-20-SM	Rounded outside edges to reduce nicking to adjacent components and leads. 20 AWG max cut.	Flush	-A	-D
TR-20-TM	Reverse cut head is angled to 50°. Special design for cutting IC leads. 22 AWG max cut.	Reverse		-D
TR-25-P	Stronger version of TR-20-M. 18 AWG max cut.	Flush	-A	-D


TRR-58


TRR-58-G

MACRO CUTTERS SPECIFICATIONS

Part No.	Description	Cut	Clip	Handle
TRR-58	Stronger version of the TRR-58-G due to chamfered cut. 10 AWG max cut.	Chamfered	-A	-D
TRR-58-G	A wide head & longer handles make this a very strong cutter. 10 AWG max cut.	Flush		

MEDIUM CUTTERS SPECIFICATIONS

Part No.	Description	Cut	Clip	Handle
CHP-170	Excellent general use tool. 16 AWG max cut.	Flush	-A	-D
TR-25-50	Similar head as CHP-170 but head is bent to 50°. 16 AWG max cut.	Flush		-D
TR-25-L	Flush cut tool with long handles. 16 AWG max cut.	Flush		
TR-25-L-25	Special 25° angle permits access to difficult to access areas. 16 AWG max cut.	Flush		
TR-30	Same head as CHP-170. Longer life due to thicker steel. 16 AWG max cut.	Flush	-A	-D
TR-30-10	Similar to TR-30 but cuts component 1.0 mm from surface. 16 AWG max cut.	Flush		-D
TR-30-58	Same as TR-30-58-R but with chamfered cut. 14 AWG max cut.	Chamfered	-A	-D
TR-30-58-R	Same head as CHP-170. HRC 58 extends cutter life beyond TR-30. 14 AWG max cut.	Flush	-A	-D
TR-30-B	Suitable for cutting plastic. 16 AWG max cut.	Flush		-D
TR-58	Stronger version of TR-58-R due to chamfered cut. 12 AWG max cut.	Chamfered	-A	-D
TR-58-R	Blunt version of TR-30-58-R for very strong cutting. 12 AWG max cut.	Flush	-A	-D
TR-5000	A stronger version of the TR-5000-R due to chamfered cut. 12 AWG max cut.	Chamfered	-A	-D
TR-5000-P	Chamfered version of TR-5000-PR. 16 AWG max cut.	Chamfered	-A	-D
TR-5000-PG	Plastic gate. 18 AWG max cut.	Flush		
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	-D
TR-5000-R	A strong flush cutter. 12 AWG max cut.	Flush	-A	-D
TRR-5000	The strongest cutter in the line. Can cut steel wire up to 10 AWG.	Chamfered	-A	

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles. Cutters with an "-A" designation may be ordered with a safety clip.



TR-30-V TR-5000-15

FRONT & STANDOFF CUTTERS SPECIFICATIONS

Part No.	Description	Cut	Clip	Handle
TR-30-V	Front cutter angled to 60° for easy access to dense areas. 18 AWG max cut.	Flush		-D
TR-5000-15	Full front center that cuts the component lead 1.5 mm. 16 AWG max cut.	Shear Flush		

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles. Cutters with an "-A" designation may be ordered with a safety clip.

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

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 longer life. Tools are available for cutting axial and radial leaded components, flatpack ICs and transistors.



PNR-30-D

SPECIFICATIONS

Part No.	Description
PNR-30-D	Forms a "C" shape standoff for axial & radial leads. Dissipative.
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.
PTR-30-C-D	Pliers that forms the component wire in a C shape and cuts off the residual part.
PTR-30-L-D	Cuts the lead & forms an "L" shape standoff for radial leaded components. Dissipative.
TP-5000-15-D	Lead termination tool, cuts & clinches lead for 30°. Dissipative.

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles.



CS-30-XZ

Shears

STANDARD

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 longer life. The two parts of the tools are joined by carefully ground holes and surfaces, enabling precise movement.

SPECIFICATIONS

Part No.	Description
CS-30	18.5 mm long shears. 16 AWG max cut
CS-30-X	Combination tool, pliers & shears Max cut 16 AWG
CS-30-XZ	Three function tool: Screwdriver, soldering tip removal & 5.5 mm long shears. Max cut 14 AWG
CSP-30-3	40 mm long straight heavy-duty shear. Max cut 000 AWG

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.



DP-15-N



DP-25-N

SPECIFICATIONS

Part No.	Description	Handle
DP-15-N	1.5 mm wide head & 3.0 mm isthmus (tab) cut	-D
DP-20-N	2.0 mm wide head & 3.0 mm isthmus (tab) cut	-D
DP-23-N	2.3 mm wide head & 3.0 mm isthmus (tab) cut	-D
DP-24-N	2.4 mm wide head & 3.0 mm isthmus (tab) cut	-D
DP-25-N	2.5 mm wide head & 3.0 mm isthmus (tab) cut	-D

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles.

Wire & Cable Strippers

STANDARD & ESD SAFE

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.

SPECIFICATIONS

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

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles.



CSP-30-1



PST-0.5



SF-40-2

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.

SPECIFICATIONS

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-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.



SC-4/2C

PN-2001



Pliers

STANDARD & ESD SAFE

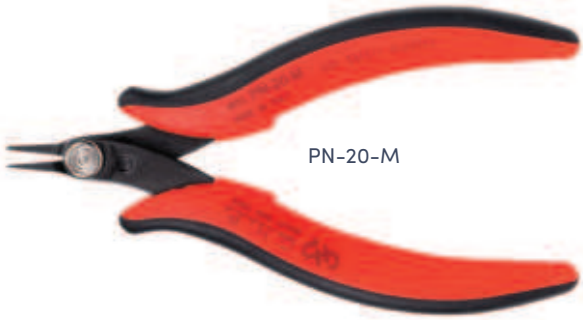
The CHP line has an extensive assortment of pliers for any need. The CHP pliers are sheared from carbon steel and then precision ground to exact specifications. The steel is heat treated to harden the tool for longer tool life. Pliers are available with short or long nose, straight or angled, serrated or smooth jaws, and fine or flat nose at 3 mm thick. Heavy-duty pliers made from 5 mm steel are also available.

Specialty Pliers

STANDARD

Micro and thin pliers are available for working with delicate parts and can access narrow and dense areas. Round nose pliers form components without damaging the leads.

PN-20-M



PN-2002-M



PN-5025



SPECIALTY PLIERS

Part No.	Description	Nose	Jaws	Hand
PN-20-M	Thin, short pliers for delicate work	Pointed 1.0 mm	Smooth 12 mm	-D
PN-2002-M	Thin, long pliers for delicate work	Pointed 1.0 mm	Smooth 32 mm	-D
PN-5025	Round nose plier	Round 1.8 mm	Smooth 26 mm	-D
PN-5028	One flat jaw & one rounded jaw	Round 2 mm Flat 5 mm	Smooth 23 mm Smooth 23 mm	

SHORT NOSE PLIERS

Part No.	Description	Nose	Jaws	Handle
PN-2001	Suitable for all types of components	Pointed 1.2 mm	Serrated 20 mm	
PN-2002	Suitable for all types of components	Pointed 1.2 mm	Smooth 20 mm	-D
PN-2003	Suitable for all types of components	Flat 3.0 mm	Serrated 20 mm	
PN-2004	Suitable for all types of components	Flat 3.0 mm	Smooth 20 mm	-D

LONG NOSE PLIERS

Part No.	Description	Nose	Jaws	Handle
PN-2005	For delicate work in tight areas	Pointed 1.2 mm	Serrated 32 mm	-D
PN-2006	For delicate work in tight areas	Pointed 1.2 mm	Smooth 32 mm	-D
PN-2007	For delicate work in tight areas	Flat 3.0 mm	Serrated 32 mm	-D
PN-2008	For delicate work in tight areas	Flat 3.0 mm	Smooth 32 mm	-D
PN-2015	Rounded Outside Edge	Rounded 1.2 mm	Serrated 32 mm	
PN-2016	Rounded Outside Edge	Pointed 1.2 mm	Smooth 32 mm	-D

45° ANGLED PLIERS

Part No.	Description	Nose	Jaws	Handle
PN-2002-PM	Gives wider angle of vision for delicate work in tight areas	Pointed 1.0 mm	Smooth 16 mm	-D
PNB-2005	Gives wider angle of vision for delicate work in tight areas	Pointed 1.2 mm	Serrated 16 mm	
PNB-2006	Gives wider angle of vision for delicate work in tight areas	Pointed 1.2 mm	Smooth 16 mm	
PNB-2007	Gives wider angle of vision for delicate work in tight areas	Flat 3.0 mm	Serrated 16 mm	
PNB-2008	Gives wider angle of vision for delicate work in tight areas	Flat 3.0 mm	Smooth 16 mm	
PNB-2015	Suitable for handling components in difficult to reach areas.	Pointed 1.2 mm	Serrated 16 mm	-D

HEAVY DUTY SHORT NOSE PLIERS

Part No.	Description	Nose	Jaws	Handle
PN-5001	General Handling of all types of components	Pointed 2.0 mm	Serrated 19 mm	-D
PN-5002	General Handling of all types of components	Pointed 2.0 mm	Smooth 19 mm	-D
PN-5003	General Handling of all types of components	Flat 5.0 mm	Serrated 19 mm	-D

HEAVY DUTY LONG NOSE PLIERS

Part No.	Description	Nose	Jaws	Handle
PN-5005	General Handling of all types of components	Pointed 2 mm	Serrated 25 mm	-D
PN-5006	General Handling of all types of components	Pointed 2 mm	Smooth 25 mm	-D
PN-5007	General Handling of all types of components	Flat 5 mm	Serrated 25 mm	-D
PN-5008	General Handling of all types of components	Flat 5mm	Smooth 25 mm	-D

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles.

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 Slot, Phillips and Torx tips.



PG2-1

SPECIFICATIONS

Part No.	Description	Handle
PG1-3	Slot tip, 2.5 x 75 mm	
PG1-4	Slot tip, 3.0 x 100 mm	-D
PG1-5	Slot tip, 3.0 x 150 mm	-D
PG2-1	Phillips tip #00, 2.5 x 60 mm	-D
PG2-2	Phillips tip #0, 3.0 x 60 mm	-D
PG4-0	Torx tip T6 x 50 mm	-D

NOTE: Hand tools ending in "-D" have ESD safe gray dissipative handles.



Slot Tip



Phillips Tip



Torx Tip

Extractors

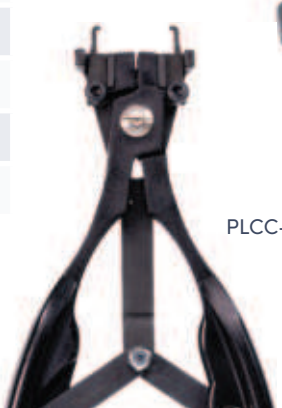
The **Extractor Series** is made up of tools specifically designed to perform the removal of PLCC type integrated circuits from the socket. The tool applies even force to prevent damage to the component during removal. Additional extractors are available for inserting and removing DIP components.

SPECIFICATIONS

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



PLCC-68



PLCC-32

Tweezers

Each **CHP Precision Tweezer** is manufactured with high quality stainless, non-magnetic, anti-acidic steels in a wide variety of tip shapes. Ideal for delicate, precision assembly.

SPECIFICATIONS

Part No.	Description
0-SA	Fine point tweezer, general purpose electronic tweezer, 120 mm
00-SA	Fine point tweezer, stronger than 0-SA, 120 mm
00B-SA	Fine point tweezer with serrated grip, 120 mm
00D-SA	Fine point tweezer with serrated grip and tip, 120 mm
0C11-SA	Fine point tweezer, smaller than 0-SA, 110 mm
1-SA	Sharp point tweezer, smaller than 0-SA, 120 mm
102-SA	Flat tip tweezer 2.2 mm wide, tips are angled to 30° to easily handle chip components, 120 mm
104-SA	Tweezers for handling of SMD components. 120 mm
105-SA	Flat tip curved tweezer 2.6 mm wide, for handling SOT packages, 120 mm
106-SA	Tweezers for handling of SMD components. Wide flat curved tip. 120 mm
107-SA	Flat tip tweezer, tip is angled to 30° to handle chip components, 120 mm
110-SA	Flat tip tweezer, tip is angled to almost 90° to handle chip components, 120 mm
2-SA	Fine point thin tapered tweezer, 120 mm
231-SA	Fine point tweezer, with serrated tip, 120 mm
2A-SA	Round point tweezer, 120 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
5-SA	Very fine point thin tapered tweezer, 110 mm
5B-SA	Tweezers with very fine and sharp tips, ideal for SMD applications; tips bent at 40° for a better visual of the work area. 110 mm
7-SA	Very fine point curved tweezer, 120 mm
7A-SA	Fine point curved tweezer, 120 mm
7E-SA	Very fine point tweezers with flat, bent tips for easier grip in high density areas. 120 mm
AA-SA	Fine point tapered tweezer, 130 mm
F-SA	Rounded flat point tweezer, 120 mm
SS-SA	Very fine point tweezers with long, thin handles. Ideal for operating close to heat sources. 140 mm



00-SA



1-SA



106-SA



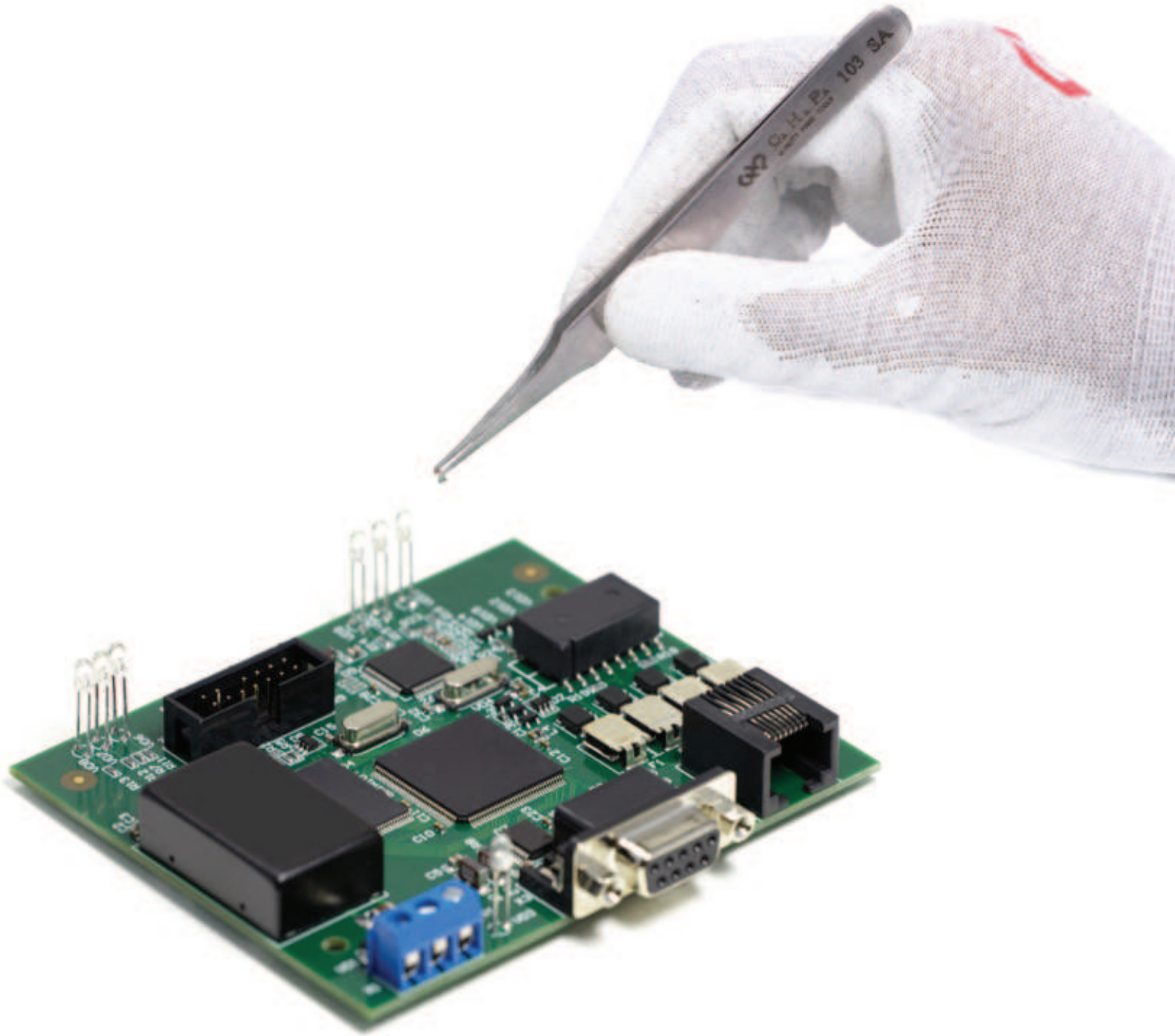
2A-SA



107-SA

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Part No. CHP-CATALOG
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