



American Hakko Products, Inc.

# PRODUCT BULLETIN

**Bulletin No:** PB397

**Issue Date:** 8-23-2016

**Available:** 9-1-2016

**Product Description:**

NEW CHP Assembly Tools

**Part No:**

See table below

**Specification:** See table below



**Brushless Electric Screwdriver:**

**Standard Series Specifications**

Model	Operation	Torque Range		Speed(RPM)		Length		Weight (lb.)	Drive Type
		(lbf.in)	(kgf.cm)	MAX	MIN	(mm)	(in.)		
AT-2000B	Lever	0.26 - 1.7	0.3 - 2.0	1000	700	229	9.0	0.91	1/4 Hex
AT-3000B	Lever	0.43 - 4.3	0.5 - 5.0	1000	700	229	9.0	0.91	1/4 Hex
AT-4000B	Lever	1.3 - 10.4	1.5 - 12.0	1000	700	229	9.0	0.91	1/4 Hex
AT-4000FB	Lever	1.3 - 10.4	1.5 - 12.0	2000	1400	229	9.0	0.91	1/4 Hex
AT-6000B	Lever	1.7 - 13.9	2.0 - 16.0	1000	700	229	9.0	0.91	1/4 Hex
AT-6500B	Lever	3.5 - 17.4	4.0 - 20.0	1000	700	229	9.0	0.91	1/4 Hex
AT-6800B	Lever	4.3 - 21.7	5.0 - 25.0	750	500	229	9.0	0.91	1/4 Hex

**Mini Series Specifications**

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



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**Standard and Mini Brushless Series**

**Contents (Screwdriver + Power Supply)**

Part Number	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
Bits	No.00 X 1.7 No.00 X 2.0	No.0 X 2.5 No.1 X 4.5	No.1 X 3.0 No.2 X 4.5	No.1 X 3.0 No.2 X 4.5	No.1 X 3.0 No.2 X 6.0	No.1 X 3.0 No.2 X 6.0	No.1 X 4.5 No.2 X 6.0	No.00 X 1.7 No.0 X 2.0	No.0 X 2.0 No.1 X 3.0
Common	<b>Connecting Cable</b> (P/N: AT-2W2122-2) <b>Torque Cover</b> (Installed on Driver) <b>RPM Adjustment Tool</b> (P/N: AT-6R3017) <b>4 Pin Terminal Connector</b> (P/N: AT-2T6012) <b>2 Pin Terminal Connector</b> (P/N: AT-2T6011) <b>Color Bands</b> (for torque identification) <b>Power Cord</b> (P/N: AT-2W1024)								

**Contents (Screwdriver + Power Supply + Balancer)**

Part Number	AT-2000B-SET	AT-3000B-SET	AT-4000B-SET	AT-4000FB-SET	AT-6000B-SET	AT-6500B-SET	AT-6800B-SET
Driver + Power Supply	AT-2000BC	AT-3000BC	AT-4000BC	AT-4000FBC	AT-6000BC	AT-6500BC	AT-6800BC
Balancer	AT-SB12						

Part Number	AT-200B-SET	AT-250B-SET
Driver + Power Supply	AT-200BC	AT-250BC
Balancer	AT-SB12	

**Brush Electric Screwdriver:**

**AT-4500 Series Specifications**

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

**AT-6000 Series Specifications**

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



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**AT-4500 Series and AT-6000 Series**

**Contents (Screwdriver + Power Supply)**

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

**Contents (Screwdriver + Power Supply + Balancer)**

Part Number	AT-2000-SET	AT-3000-SET	AT-4000-SET	AT-4500-SET	AT-6000-SET	AT-6500-SET	AT-6800-SET
<b>Driver + Power Supply</b>	AT-2000C	AT-3000C	AT-4000C	AT-4500C	AT-6000C	AT-6500C	AT-6800C
<b>Balancer</b>	AT-SB12						

**Direct Plug-in Series Specifications**

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

**Contents**

Part Number	AT-3681	AT-5681	AT-6681
<b>Bits</b>	No.00 X 1.7 No.00 X 2.0	No.0 X 2.5 No.1 X 4.5	No.0 X 2.5 No.1 X 4.5
<b>Common</b>	<b>Replacement Carbon Brush</b> (P/N: AT-2B1014) <b>Torque Cover</b> (P/N: AT-0003) <b>Power Cord</b> (P/N: AT-2W1086)		



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**Power Supply:**

**Specifications**

Item \ Part No.	APS-301A	APS-351B	APM-301A	APM-301C
<b>Output Voltage</b>	20 – 30V	25 – 35V	20 – 30V	20 – 30V
<b>Input Voltage</b>	100 – 240V			
<b>Power Consumption</b>	60W	59.5W	75W	75W
<b>Dimensions</b>	164 x 64 x 42mm		172 x 84 x 46mm	
<b>Applicable Drivers</b>	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 Power Supply:**

**Specifications**

Item \ Part No.	AM-30	AM-45	AM-85
<b>Output Voltage</b>	20 – 30V	25 – 35V	20 – 30V
<b>Input Voltage</b>	100 – 240V		
<b>Power Consumption</b>	75W	70W	75W
<b>Dimensions</b>	172 x 84 x 61mm		
<b>Applicable Drivers</b>	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

**Spring Balancer:**

**Specifications**

Part No.	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



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## High Precision Torque Meter:

### Specifications

Part No.	Standard Measuring Range		Accuracy	Measuring Direction	Power Source	Dimension (mm)	Weight (kg)
	(lbf.in)	(kgf.cm)					
AP-02	0.026 – 1.73	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	0.13 – 8.68	0.15 – 10.0					
AP-50	0.65 – 43.4	0.75 – 50.0					
AP-100	1.3 – 86.8	1.5 – 100.0					
AP-300	3.91 – 260.4	4.5 – 300.0					

## Screw Feeder:

### Specifications

Part No.	Weight		Usable Screws	Maximum Screw Length (mm)	Protection and Recovery Functions	Input Voltage (VAC)	Dimensions (mm)
	(kgs)	(lbs)					
AT-1050	1.8	4.0	M1 – M5	20	Overload protection circuit, reverse power polarity prevention circuit	100 - 240	185 x 130 x 150
AT-1060	4.8	10.6	M1 – M6	25			235 x 165 x 180

## Screw Feeder with Digital Counter:

### Specifications

Part No.	Weight		Usable Screws	Maximum Screw Length (mm)	Protection and Recovery Functions	Input Voltage (VAC)	Dimensions (mm)
	(kgs)	(lbs)					
AT-1050C	2.2	4.9	M1 – M5	20	Overload protection circuit, reverse power polarity 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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***Comment:***

American Hakko Products is proudly introducing the newest line of product into the CHP brand, the CHP assembly tools. Supported by our deep understanding of the electronic manufacturing industry and the need for quality tools, the CHP assembly tools are the new solution to your assembly process.

The CHP assembly tool offers brushless and brush type electric screwdrivers that cover varies torque ranges with precision torque control to meet your assembly requirement. Brushless screwdriver eliminates carbon brushes, minimizes maintenance and is suitable for clean room environment. While the standard brushless series can be used for all electronic assembly, the mini brushless screwdrivers are designed specifically for cellphone and small electronic assembly. CHP brush motor electric screwdriver features large side windows for easy brush replacement and thus minimize down time. Direct plug-in models with push-to-start function are also available. All CHP electric screwdrivers are suited for the electronic industry with ESD safe design.

The screwdriver power supply features stepless RPM control and soft start for select models. Optional error-proofing power supply monitors your assembly process to ensure proper and consistent installation. All power supply can be mounted onto the CHP spring balancer for extra space saving. CHP assembly tool also offers high precision torque meters for torque calibration, and adjustable screw feeders that increase installation efficiency.