



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 | Connecting Cable (P/N: AT-2W2122-2) Torque Cover (Installed on Driver) RPM Adjustment Tool (P/N: AT-6R3017) 4 Pin Terminal Connector (P/N: AT-2T6012) 2 Pin Terminal Connector (P/N: AT-2T6011) Color Bands (for torque identification) Power Cord (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 |
|---------------------|---|--------------------------|--------------------------|---|--------------------------|--------------------------|--------------------------|
| 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 |
| Bits | 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 |
| Common | Connecting Cable (P/N: AT-2W2122-2) Replacement Carbon Brush (P/N: AT-2B1018) Torque Cover (Installed on Driver, P/N: AT-0001) Hex Wrench RPM Adjustment Tool (P/N: AT-6R3017) 4 Pin Terminal Connector (P/N: AT-2T6012) 2 Pin Terminal Connector (P/N: AT-2T6011) Color Bands (for torque identification) Power Cord (P/N: AT-2W1024) | | | Connecting Cable (P/N: AT-2W2133-2) Replacement Carbon Brush (P/N: AT-2B1016) Torque Cover (P/N: AT-0002) RPM Adjustment Tool (P/N: AT-6R3017) 4 Pin Terminal Connector (P/N: AT-2T6012) 2 Pin Terminal Connector (P/N: AT-2T6011) Color Bands (for torque identification) Power Cord (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 |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Driver + Power Supply | AT-2000C | AT-3000C | AT-4000C | AT-4500C | AT-6000C | AT-6500C | AT-6800C |
| Balancer | 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 |
|---------------|--|--------------------------|--------------------------|
| Bits | 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 |
| Common | Replacement Carbon Brush (P/N: AT-2B1014) Torque Cover (P/N: AT-0003) Power Cord (P/N: AT-2W1086) | | |



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Power Supply:

Specifications

| Item \ Part No. | 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-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 |
|---------------------------|---|--|-------------------------------|
| 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-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.