**ULTRA-PRECISION**

**BRUSHLESS MOTOR & SPINDLE**

**“ASTRO-E 250”**

- High-performance brushless motor which provides compact size, light weight, output (Max. 105W), and excellent durability (motor endurance to 5,000 hours of continuous use by NSK’s internal standard load test). By the combination with high-performance spindles, it can be installed on a NC lathe, special purpose machine, robot, etc.

**ASTRO-E 250 System Chart**

- Changeable with a variety of attachments depending on the purpose of use.

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**DISCONTINUED PRODUCT**

**CALL FOR AVAILABILITY**

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**Features of ASTRO-E 250**

- **Motor Speed**
  - 2,000~25,000 min⁻¹ (rpm) steplessly adjustable
  - Compact size, lightweight and maximum output (105W)

- **Easily readable motor speed display**
  - Motor speed is displayed accurately on the front panel.

- **Protection Circuit**
  - The control unit is compact and lightweight. It features a protection circuit to stop the motor automatically in case of overload ensuring safe and smooth operation.

- **Sequence Control**
  - Automatic is realized by sequence control.

- **Brushless Motor**
  - Brushless motor is highly reliable and has excellent durability.

- **Smooth Rotation**
  - Smooth rotation with little vibration throughout the speed range.

- **Maximizes the spindle system**
  - High-quality circuitry is incorporated to ensure gentle start and stop the motor if trouble occurs.

- **Wide variety of spindles**
  - Many different types of spindles are available making this system perfect for many different applications.

- **Withstands 5,000 hours of continuous use**
  - Air can be supplied to the spindle to prevent contamination from coolants or other contaminants. (Use Air Line Kit AL-0201)

- **Cord with Quick Disconnect**
  - Air Intake for spindle protection
  - The absence of a commutator and the use of a photo coupler sending a feedback signal of 48 pulses per revolution result in very smooth rotation with little vibration throughout the speed range.

- **Cord with Quick Disconnect**
  - Motor Control Circuit
  - High-quality circuitry is incorporated to ensure gentle start and stop the motor if trouble occurs.

- **Air Intake for spindle protection**
  - Air can be supplied to the spindle to prevent contamination from coolants or other contaminants. (Use Air Line Kit AL-0201)

- **Cord with Quick Disconnect**
  - Wide variety of spindles
  - Many different types of spindles are available making this system perfect for many different applications.

- **Cord with Quick Disconnect**
  - Withstands 5,000 hours of continuous use (By NSK’s Internal Standard load tests)
  - Brushless motor has no carbon brushes or commutator, minimizing wear and resulting in a long service life.

- **Cord with Quick Disconnect**
  - Due to the brushless construction electrical interference and other noises are minimized.

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**AMERICAN ROTARY TOOLS CO.**

Toll Free USA Tel: (800) 624-2212

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**Torque Characteristics of ASTRO-E 250**

- **Discontinued Product**
  - CALL FOR AVAILABILITY

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© Do not exceed the maximum motor speed recommendation for the spindles. Exceed speed will dramatically reduce bearing life.
**ASTRO-E 250" STANDARD SET & CONTROL UNIT**

**ASTRO-E 250 STANDARD SET & CONTROL UNIT**

<table>
<thead>
<tr>
<th>CAT. No.</th>
<th>Model</th>
<th>Standard Equipment</th>
<th>Accessories</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEX1570</td>
<td>E250-N30</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.  • Motor speed is displayed to 2 digit accuracy by the digital display.</td>
<td>25,000 min⁻¹ (rpm)</td>
</tr>
<tr>
<td>ASEX9030</td>
<td>E255-N30</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.</td>
<td>25,000 min⁻¹ (rpm)</td>
</tr>
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**ASTRO-E 250 STANDARD SET**

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<tbody>
<tr>
<td>ASEX6157</td>
<td>NE72</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.</td>
<td>25,000 min⁻¹ (rpm)</td>
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</table>

**High Quality - Advanced Function**

- High quality electronic circuitry provides stable motor speed even under high loads, soft start, emergency stop function and motor feedback monitoring.
- Safety mechanism stops the motor if the system over loaded.
- Auto motor start/stop function is available.
- Multiple motors can be controlled by a single control unit by incorporating the selector unit.
- Motor speed is displayed to 2 digit accuracy by the digital display.

**ASTRO-E 250 STANDARD SET**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>ASEX6172</td>
<td>NE72</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.</td>
<td>25,000 min⁻¹ (rpm)</td>
</tr>
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**ASTRO-E 250 CONTROL UNIT NE72**

<table>
<thead>
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<tr>
<td>ASEX6172</td>
<td>NE72</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.</td>
<td>25,000 min⁻¹ (rpm)</td>
</tr>
</tbody>
</table>

**ASTRO-E Selector Unit 2**

<table>
<thead>
<tr>
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<th>Standard Equipment</th>
<th>Accessories</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASEX9028</td>
<td>EM-255</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.</td>
<td>25,000 min⁻¹ (rpm)</td>
</tr>
</tbody>
</table>

**ASTRO-E Selector Unit 2 & BRUSHLESS MOTOR**

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<tr>
<td>ASEX9028</td>
<td>EM-255</td>
<td>• Motor w/Cord (EM-250)</td>
<td>Control Unit (NE72)  • Spindle (NR-302)  • Collet Chuck ø1/8&quot; (EM-255)  • Chuck Nut (NE135)  • Wrench (12 x 14) : 2 pcs., (22 x 27) 1 pc., (20 x 24) : 1 pc.</td>
<td>25,000 min⁻¹ (rpm)</td>
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**POWER SOURCE TERMINAL (DC 24V)**

- Power Source Terminal
- Motor Source Terminal
- Air Intake Inlet
- Motor & Spindle

**SYSTEM CHART FOR AUTOMATIC CONTROL OF MULTIPLE MOTORS**

- Power Switch
- Manual / Auto Selector Switch
- Forward/Reverse Select Switch & Breaker Releasing Switch
- Speed Control Knob
- Connector for Motor Cord
- Sequence Control
- Intake with Power Fuse

**Brushless Motor**

- Motor Speed: 2,000–25,000 min⁻¹ (rpm)
- Max. Output Power: 105W
- Weight: 1 lb 1.1 oz.
- Cord: Length 13 ft
- Optional: Air Line Kit (04-5201)

**Contact Information**

AMERICAN ROTARY TOOLS CO. (ARTCO TOOLS)
1825 SOUTH PECK ROAD
MONROVIA, CA USA 91016-4778
Tel: (626) 358-8466  Fax: (626) 358-0076
Toll Free USA Tel: (800) 624-2212  Fax: (800) 624-2210
Email: info@artco tools.com

Order by catalog number.  2-p35
**“ASTRO-E 250” SPINDLE**

ASTRO-E 250 can use cooling water and oil during processing work.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>AS41086</td>
<td>SPINDLE</td>
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</tbody>
</table>

- **Allowable Motor Speed**: 30,000 min (rpm)
- **Spindle Accuracy**: Within 1 µm
- **Standard Size Collet Chuck**: (CHC-3.175)
- **Weight**: 7.64 oz.

**INDEX**

- (8 x 5), (10 x 10), (20 x 24)
- Chuck Nut (K-265): 1 pc.
- Wrench (ø6mm)

**EXAMPLES**

**APPLICATION**

<table>
<thead>
<tr>
<th>CAT. No.</th>
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<tbody>
<tr>
<td>9</td>
<td></td>
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</table>

**PARTS**

- Grindstone Arbor (AGM-03): For grinding wheel with I.D. of ø5 mm

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**“ASTRO-E 250” SPINDLE & SPEED REDUCER & AIR LINE KIT**

**INDEX**

- Chuck Nut (K-265): 1 pc.
- Wrench (12 x 14): 2 pcs.,
- Collet Chuck ø1/8" (CHK-3.175): 1 pc.

**EXAMPLES**

**APPLICATION**

<table>
<thead>
<tr>
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<th>Accessories</th>
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<tbody>
<tr>
<td>11414</td>
<td>ARG-01</td>
<td></td>
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</table>

- **Maximum allowable motor speed for the spindle**: 30,000 min (rpm)
- **Speed Reducing Mechanism**: By planetary gear system
- **Weight**: 8.2 oz.

**Speed Reducer**

<table>
<thead>
<tr>
<th>CAT. No.</th>
<th>Model</th>
<th>Speed Reduction Ratio</th>
<th>Price</th>
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<tr>
<td>AS11414</td>
<td>ARG-01</td>
<td>1.35/0.92</td>
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</table>

**AIR LINE KIT AL-0201**

- **Air Line Kit AL-0201** is a clean air supply unit for ASTRO-E Control Unit. The dust and moisture in the compressed air are eliminated by the filter in the first stage and the regulator provides accurate and stable air to the control unit.

**INDEX**

- Kit Filter + Air Regulator + Air Pressure Gauge + Air ON-OFF Valve + Hose for Piping (ø8): 6 ft

**REDUCER (ø6 - ø4 mm Adaptor)**

<table>
<thead>
<tr>
<th>CAT. No.</th>
<th>Model</th>
<th>Specifications</th>
<th>Price</th>
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<tbody>
<tr>
<td>U235406</td>
<td>Reducer</td>
<td>ø6 - ø4 mm Adaptor</td>
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</table>

- **Order by catalog number.**