HK Series Cross Roller Parallel Hand

Smooth Motion via Bearings

**Key Features**

- **High accuracy and smooth operation with cross roller guide**
  Cross roller bearing used in the sliding material provides high accuracy and smooth motion
- **Compact body and high rigidity**
  Telescopic slides and bearing retainers to provide high rigidity to size ratio
- **Protective rubber cover (option) for use in dusty and harsh environments**
  Rubber cover for harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism
- **Oil-resistant sensors (option)**
  Oil-resistant sensors available (option) for HK-50AS1, 63AS1, and 80AS

**How To Order**

```
<table>
<thead>
<tr>
<th>Size</th>
<th>Sensor</th>
<th>Quantity</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>HK-32MS</td>
<td>ET3</td>
<td>S2</td>
<td>G</td>
</tr>
</tbody>
</table>
```

**Specification**

<table>
<thead>
<tr>
<th>Model</th>
<th>HK-32MS</th>
<th>HK-40MS</th>
<th>HK-50AS1</th>
<th>HK-63AS1</th>
<th>HK-80AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Pressure</td>
<td>Pneumatic: 0.1 to 0.7 MPa (0.3 to 0.7MPa for NO &amp; NC types)</td>
<td>Pneumatic: 0.3 to 0.7MPa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not Required</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Parts List**

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Material</th>
<th>No</th>
<th>Name</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum</td>
<td>10</td>
<td>Retainer A</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>2</td>
<td>Cylinder</td>
<td>Aluminum</td>
<td>11</td>
<td>Fulturum Shaft</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>3</td>
<td>Cylinder Cover</td>
<td>Resin</td>
<td>12</td>
<td>Operating Shaft B</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>4</td>
<td>Piston</td>
<td>Stainless Steel</td>
<td>13</td>
<td>Piston Seal</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>5</td>
<td>Arm</td>
<td>Carbon Steel</td>
<td>14</td>
<td>Rod Seal</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>6</td>
<td>Master(Base) Jaw</td>
<td>Stainless Steel</td>
<td>15</td>
<td>Cylinder Seal A</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>7</td>
<td>Bearing Guide</td>
<td>Carbon Steel</td>
<td>16</td>
<td>Cylinder Seal B</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>8</td>
<td>Cushion</td>
<td>Resin</td>
<td>17</td>
<td>Snap Ring</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>9</td>
<td>Side Cover</td>
<td>Stainless Steel</td>
<td>18</td>
<td>Roller</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

**Seals List**

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>PSD-32</td>
<td>PSD-40</td>
</tr>
<tr>
<td>14</td>
<td>MYA-16</td>
<td>MYA-20</td>
</tr>
<tr>
<td>15</td>
<td>P-26</td>
<td>G-35</td>
</tr>
<tr>
<td>16</td>
<td>S-29</td>
<td>S-36</td>
</tr>
</tbody>
</table>

Some of the model numbers have been changed from MS to AS1
HK Series  Cross Roller Parallel Hand

Smooth Motion via Bearings

Key Features

■ High accuracy and smooth operation with cross roller guide
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■ Protective rubber cover (option) for use in dusty and harsh environments
  Rubber cover for harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism

■ Oil-resistant sensors (option)
  Oil-resistant sensors available (option) for HK-50AS1, 63AS1, and 80AS

How To Order

HK-32MS

<table>
<thead>
<tr>
<th>Option</th>
<th>Size</th>
<th>Sensor</th>
<th>Quantity</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>HK - 32MS - ET3</td>
<td>S2</td>
<td>G</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HK-32MS with Rubber cover and 2 of ET3 non-contact Reed switches

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Specification

Model | HK-32MS | HK-40MS | HK-50AS1 | HK-63AS1 | HK-80AS |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>HK-32MS</td>
<td>HK-40MS</td>
<td>HK-50AS1</td>
<td>HK-63AS1</td>
<td>HK-80AS</td>
</tr>
<tr>
<td>Working Pressure (Pa)</td>
<td>Pneumatic: 0.1 to 0.7 MPa (0.1 to 0.7 MPa for NO &amp; NC types)</td>
<td>Pneumatic: 0.1 to 0.7 MPa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not Required or Turbine Oil Class 1 (ISOVG32)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ambient Temperature (°C)</th>
<th>5 to 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Jaw Stroke (mm)</td>
<td>24</td>
</tr>
<tr>
<td>Cylinder Diameter (mm)</td>
<td>dia.32</td>
</tr>
<tr>
<td>Rod Diameter (mm)</td>
<td>dia.16</td>
</tr>
<tr>
<td>Internal Volume (cm³/m³)</td>
<td>25.3</td>
</tr>
<tr>
<td>Repeatability (%)</td>
<td>±0.01</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>1.36</td>
</tr>
</tbody>
</table>

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Internal Structure / Parts & Seals

- **Standard**
  - No (Single Acting - Normally Open)
  - NC (Single Acting - Normally Closed)

- **Parts List**
  - No | Name | Material | No | Name | Material |
  - 1 | Body | Aluminum | 10 | Retainer A | Stainless Steel |
  - 2 | Cylinder | Aluminum | 11 | Fulorunt Shaft | Carbon Steel |
  - 3 | Cylinder Cover | Resin | 12 | Operating Shaft B | Carbon Steel |
  - 4 | Piston | Stainless Steel | 13 | Piston Seal | Stainless Steel |
  - 5 | Arm | Carbon Steel | 14 | Rod Seal | Stainless Steel |
  - 6 | Master/Base Jaw | Carbon Steel | 15 | Cylinder Seal A | Carbon Steel |
  - 7 | Bearing Guide | Carbon Steel | 16 | Cylinder Seal B | Carbon Steel |
  - 8 | Cushion | Resin | 17 | Snap Ring | Stainless Steel |
  - 9 | Side Cover | Stainless Steel | 18 | Roller | Stainless Steel |

- **Seals List**
  - No | Name | Material |
  - 13 | PSD-32 | PSD-40 |
  - 14 | MYA-16 | MYA-20 |
  - 15 | P-26 | G-35 |
  - 16 | S-29 | S-36 |

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Some of the model numbers have been changed from MS to AS1
**HK Series** Cross Roller Parallel Hand

### Performance Data

**Grip Force**
The graph shows grip force in opening and closing with effective external finger lengths $l$ from gripper cover surface under different air pressure (MPa).

- **Open** (●)
- **Closed** (●●)

### Layout Drawing

**HK-32MS** (Optimal Grip Force 200N to 350N)

HK-32MS Standard • NO • NC

*Values inside ( ) are for NO (Normally Open) and NC (Normally Closed) type*

Some of the model numbers have been changed from MS to AS.
HK Series Cross Roller Parallel Hand

**Performance Data**

**Grip Force**
The graph shows grip force in opening and closing with effective external finger lengths $l$ from gripper cover surface under different air pressure (MPa).

- **Open (○)**
- **Closed (●)**

**Layout Drawing**

**HK-32MS** (Optimal Grip Force 200N to 350N)

- **HK-32MS** Standard • NO • NC

*Values inside ( ) are for NO (Normally Open) and NC (Normally Closed) type.

For CAD data, please go to [link]

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Some of the model numbers have been changed from MS to AS1

HK-32MS/40MS/50AS1/63AS1/80AS
Some of the model numbers have been changed from MS to AS1

HK Series Cross Roller Parallel Hand

HK-32MS/40MS/50AS1/63AS1/80AS

Layout Drawing

HK-40MS (Optimal Grip Force 350N to 600N)

HK-50AS1 (Optimal Grip Force 500N to 800N)

*Values inside ( ) are for NO (Normally Open) and NC (Normally Closed) type

For CAD data, please go to [link]
Some of the model numbers have been changed from MS to AS1

HK Series Cross Roller Parallel Hand

HK-40MS (Optimal Grip Force 350N to 600N)

HK-40MS Standard • NO • NC

*Values inside ( ) are for NO (Normally Open) and NC (Normally Closed) type

HK-50AS1 (Optimal Grip Force 500N to 800N)

HK-50AS1 Standard • NO • NC

*Values inside ( ) are for NO (Normally Open) and NC (Normally Closed) type

For CAD data, please go to HK Series CAD Library

Hand (2-Jaw)

HK-32MS/40MS/50AS1/63AS1/80AS

Some of the model numbers have been changed from MS to AS1

HK Series Cross Roller Parallel Hand

Layout Drawing

HK-63AS1 (Optimal Grip Force 800N to 1400N)

HK-63AS1 Standard • NO • NC

HK-80AS (Optimal Grip Force 2000N to 3000N)

HK-80AS Standard

*Values inside ( ) are for NO (Normally Open) and NC (Normally Closed) type

For CAD data, please go to [link]
HK Series Cross Roller Parallel Hand

**HK-63AS1** (Optimal Grip Force 800N to 1400N)

**HK-80AS** (Optimal Grip Force 2000N to 3000N)

Some of the model numbers have been changed from MS to AS1.

*Values inside ( ) are for NO ( Normally Open) and NC ( Normally Closed) types.*

For CAD data, please go to 51E8.

*HK-32MS/40MS/50AS1/63AS1/80AS*