HMF Series  Wide Opening Parallel Hand

Low Height Wide Opening Crab-Shaped Parallel Hand for Use in Multi-Purpose Application

Key Features
- **Small and light-weight**
  - Low profile body design for use in confined spaces
  - Simple and compact body design
- **Powerful grip force**
  - High grip force by using 2 pistons
- **Long stroke for handling multiple workpieces in different sizes**
  - Long motion stroke for multi-purpose use

How To Order

<table>
<thead>
<tr>
<th>Standard</th>
<th>HMF-12AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>HMF-16AS/20AS/25AS/32AS/40AS</td>
</tr>
</tbody>
</table>

| Option | HMF-16AS-L1 with base jaws mounted by 90-degree and 2 of 97 non-contact reed switches |

<table>
<thead>
<tr>
<th>Model</th>
<th>Size Stroke Sensor, Quantity Option</th>
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<tbody>
<tr>
<td><strong>HMF-12AS</strong></td>
<td>599</td>
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<tr>
<td><strong>HMF-16AS</strong></td>
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<td><strong>HMF-20AS</strong></td>
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<td><strong>HMF-25AS</strong></td>
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<td><strong>HMF-32AS</strong></td>
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<td><strong>HMF-40AS</strong></td>
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<table>
<thead>
<tr>
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<th>Material</th>
<th>No.</th>
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<th>Material</th>
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<tbody>
<tr>
<td>1</td>
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<td>Washer</td>
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</tr>
<tr>
<td>2</td>
<td>Master (Base) Jaw</td>
<td>Aluminum</td>
<td>11</td>
<td>Needle Bearing Seal</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>3</td>
<td>Piston</td>
<td>Stainless Steel</td>
<td>12</td>
<td>Snap Ring</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>4</td>
<td>Guide Rod</td>
<td>Stainless Steel</td>
<td>13</td>
<td>Snap Ring</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>5</td>
<td>Cylinder Cover</td>
<td>Stainless Steel</td>
<td>14</td>
<td>Snap Ring</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>6</td>
<td>Pinion Gear</td>
<td>Carbon Steel</td>
<td>15</td>
<td>Magnet</td>
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<tr>
<td>7</td>
<td>Pinion Cover</td>
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<td>16</td>
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<td>8</td>
<td>Cushion</td>
<td>Stainless Steel</td>
<td>17</td>
<td>Piston Gasket</td>
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<td>9</td>
<td>Pinion Gear Shaft</td>
<td>Stainless Steel</td>
<td>18</td>
<td>Rod Gasket</td>
<td>Stainless Steel</td>
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*Equipped to 12 AS and 16 AS only

<table>
<thead>
<tr>
<th>Performance Data</th>
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<tbody>
<tr>
<td><strong>HMF-12AS</strong></td>
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<tr>
<td><strong>HMF-20AS</strong></td>
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<td><strong>HMF-32AS</strong></td>
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<td><strong>HMF-40AS</strong></td>
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HMF Series  Wide Opening Parallel Hand

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  - Long motion stroke for multi-purpose use

How To Order

Standard  HMF-12AS

<table>
<thead>
<tr>
<th>Option</th>
<th>Size</th>
<th>Stroke</th>
<th>Sensor, Quantity</th>
<th>Model</th>
<th>Name</th>
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<tr>
<td></td>
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HMF-16AS-L1 with base jaws mounted by 90-degree and 2 of ET3 non-contact reed switches

<table>
<thead>
<tr>
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<td>Long Stroke</td>
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<td>ET3S2 - MY</td>
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<tr>
<td>L2</td>
<td>Long Stroke</td>
<td>20AS</td>
<td>ET3S2 - MY</td>
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<tr>
<td>B1</td>
<td>Linear Guide</td>
<td>25AS</td>
<td>ET3S2 - MY</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>Linear Guide</td>
<td>32AS</td>
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<td>B3</td>
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Specifcation

<table>
<thead>
<tr>
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<th>HMF-25AS-B</th>
<th>HMF-32AS</th>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Working Pressure</td>
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<tr>
<td>Lubrication</td>
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<td>Ambient Temperature</td>
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<td>Total Jaw Stroke</td>
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<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>100</td>
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<tr>
<td>Cylinder Diameter</td>
<td>dia.12X2</td>
<td>dia.16X2</td>
<td>dia.20X2</td>
<td>dia.25X2</td>
<td>dia.32X2</td>
<td>dia.40X2</td>
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<tr>
<td>Rod Diameter</td>
<td>dia.6</td>
<td>dia.8</td>
<td>dia.10</td>
<td>dia.12</td>
<td>dia.16</td>
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<td>0.95</td>
<td>1.12</td>
<td>0.9</td>
<td>1.58</td>
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</table>

Internal Structure / Parts & Seals

- **HMF-12AS to 25AS** (Standard Stroke)
- **HMF-32AS/40AS** (Standard Stroke)
- **HMF-25AS to 40AS-B1B2** (Long Stroke)

<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>Washer *</td>
<td>Carbon Steel</td>
</tr>
<tr>
<td>2</td>
<td>Master (Base)</td>
<td>Needle Bearing</td>
<td>11</td>
<td>Needle Bearing</td>
<td>Stainless Steel</td>
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<tr>
<td>3</td>
<td>Piston</td>
<td>Stainless Steel</td>
<td>12</td>
<td>Snap Ring</td>
<td>Stainless Steel</td>
</tr>
<tr>
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<td>Stainless Steel</td>
</tr>
</tbody>
</table>

Seals List

- **HMF-12AS**
- **HMF-16AS-L1**
- **HMF-20AS-L1**
- **HMF-25AS-L1**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
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<th>No.</th>
<th>Name</th>
<th>Material</th>
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<td>S-18</td>
<td>S-21</td>
<td>S-29</td>
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<tr>
<td>17</td>
<td>PSD-12</td>
<td>PSD-16</td>
<td>PSD-20</td>
<td>PSD-24</td>
<td>PSD-32</td>
</tr>
<tr>
<td>18</td>
<td>MYA-6</td>
<td>MYA-8</td>
<td>MYA-10</td>
<td>MYA-12</td>
<td>MYA-16</td>
</tr>
<tr>
<td>23</td>
<td>—</td>
<td>S-5</td>
<td>S-7</td>
<td>S-12</td>
<td>S-16</td>
</tr>
</tbody>
</table>

Performance Data

- **Grip Force**
  - The graph shows grip force in opening and closing with effective external finger lengths from gripper cover surface under different air pressure (MPa)
  - Open (○)
  - Closed (●)

- **HMF-12AS**
- **HMF-20AS**
- **HMF-25AS**
- **HMF-32AS**
- **HMF-40AS**
### HMF-12AS

**Optimal Grip Force 40N to 80N**

**HMF-12AS Standard**

- View A
- 2-M4 x 0.7 depth 6 Mount Hole
- M5 x 0.8 air port (Open)
- 2 x 2-M5 x 0.8

### HMF-16AS

**Optimal Grip Force 80N to 160N**

**HMF-16AS Standard • L1 • L2**

- View A
- 2-M5 x 0.8 depth 7 Mount Hole
- M5 x 0.8 air port (Close)
- 2 x 2-M5 x 0.8

---

### HMF-12AS-E

- 2-M4 x 0.7 depth 6 Mount Hole
- 2 x 2-M5 x 0.8

### HMF-16AS-E

- 2-M5 x 0.8 depth 8 Mount Hole
HMF Series  Wide Opening Parallel Hand

**HMF-20AS**  (Optimal Grip Force 100N to 250N)

**HMF-20AS Standard • L1 • L2**

- View A
- 2 × M6 × 1.0 depth 10 Mount Hole
- M5 × 0.8 ar port (Open)
- M5 × 0.8 ar port (Close)
- 4 × M6 × 1.0 depth 12 Mount Hole

**HMF-25AS**  (Optimal Grip Force 150N to 350N)

**HMF-25AS Standard • L1 • L2**

- View A
- 2 × M6 × 1.0 depth 12 Mount Hole

**HMF-25AS-E S**

**HMF-20AS-E S**

For CAD data, please go to [CAD].

---

**HMF-12AS/16AS/20AS/25AS/32AS/40AS**

---

101 102
HMF Series  Wide Opening Parallel Hand

### HMF-20AS (Optimal Grip Force 100N to 250N)

#### HMF-20AS Standard • L1 • L2

- **View A**
  - Dimensions:
    - L: 48
    - 2 x M6 x 1.0
    - Depth 10
    - Mount Hole

- **Standard**
  - R
  - C
  - D
  - E
  - F
  - G
  - H
  - I
  - J
  - K
  - L
  - L1
  - L2

- **Dimensions**
  - 114
  - 74
  - 56
  - 38
  - 9
  - 56
  - 74
  - 34
  - 18
  - 20
  - 9

- **Min B**
  - 10

- **Max B**
  - 10

### HMF-25AS (Optimal Grip Force 150N to 350N)

#### HMF-25AS Standard • L1 • L2

- **View A**
  - Dimensions:
    - L: 68
    - 2 x M6 x 1.0
    - Depth 10
    - Mount Hole

- **Standard**
  - R
  - C
  - D
  - E
  - F
  - G
  - H
  - I
  - J
  - K
  - L
  - L1
  - L2

- **Dimensions**
  - 147
  - 71
  - 48
  - 9, 9, 9, 19, 17, 9, 17, 9, 9, 9, 9, 9, 9, 9
  - 104, 117
  - 233
  - 133, 112, 70, 6.5, 120, 133, 70, 31, 31, 31, 31, 31, 52, 32

- **Min B**
  - 10

- **Max B**
  - 10

### HMF-25AS-E • S

#### HMF-25AS-B1 • B2

- **View A**
  - Dimensions:
    - L: 68
    - 2 x M6 x 1.0
    - Depth 12
    - Mount Hole

- **Standard**
  - R
  - C
  - D
  - E
  - F
  - G
  - H
  - I
  - J
  - K
  - L
  - L1
  - L2

- **Dimensions**
  - 113
  - 13
  - 96
  - 8, 44, 2, 111, 19, 19, 19, 52, 32, 32
  - 96
  - 8, 44, 2, 110, 14, 19, 19, 52, 32, 32

- **Min B**
  - 10

- **Max B**
  - 10

---

For CAD data, please go to [Link]
HMF Series  Wide Opening Parallel Hand

### HMF-32AS
(Optimal Grip Force 250N to 500N)

**HMF-32AS Standard • L1 • L2**

![View A](image1)

**HMF-32AS-E • S**

![View A](image2)

**HMF-32AS-B1 • B2**

![View A](image3)

**Hand (2-Jaw)**

- 3
- 6
- 9
- 12
- 15
- 18
- 21
- 24
- 27
- 30
- 33
- 36
- 39
- 42
- 45
- 48
- 51
- 54
- 57
- 60
- 63
- 66
- 69
- 72
- 75
- 78
- 81
- 84
- 87
- 90
- 93
- 96
- 99
- 102
- 105
- 108
- 111
- 114

### HMF-40AS
(Optimal Grip Force 450N to 850N)

**HMF-40AS Standard • L1 • L2**

![View A](image4)

**HMF-40AS-E • S**

![View A](image5)

**HMF-40AS-B1 • B2**

![View A](image6)

For CAD data, please go to [CAD]