HLAG Series Thin Parallel Hand w/ Rubber Cover (Bush Type)

### Key Features

- **Bush guide**
  - Bush guide provides high impact resistance
- **For use in both small and large workpiece handling**
  - Low height compact design
  - Long motion stroke for multi-purpose use
- **Protective rubber cover for use in dusty and harsh environments**
  - Rubber cover to improve protection from harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism

### How To Order

**Standard**

- HLAG-12AS

**Option**

- HLAG-12AS - E16S2 - GH
  - HLAG-12AS-GH (HLAG-12AS with oil-resistant (fluorubber) cover) with 2 of E16 non-contact reed switches

### Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>HLAG-12AS</th>
<th>HLAG-15AS</th>
<th>HLAG-20AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Layout Drawing</td>
<td><img src="image1.png" alt="Drawing Image" /></td>
<td><img src="image2.png" alt="Drawing Image" /></td>
<td><img src="image3.png" alt="Drawing Image" /></td>
</tr>
<tr>
<td>Working Pressure</td>
<td>Pneumatic: 0.3 to 0.7MPa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not Required or Turbine Oil Class 1 (ISOVG32)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>5 to 60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Jaw Stroke (mm)</td>
<td>15 20 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder Diameter (mm)</td>
<td>dia.12 dia.15 dia.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal Volume (cm³/ml)</td>
<td>1.69 3.53 7.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability (mm)</td>
<td>±0.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (g)</td>
<td>175 305 545</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Internal Structure / Parts & Seals

- **Parts List**
  - No. Name Material No. Name Material
  - 1 Body Aluminum 7 Guide Rod 13 Bush Carbon Steel
  - 2 Master (Base) Jaw Aluminum 8 Magnet 14 Parallel Pin Carbon Steel
  - 3 Piston Stainless Steel 9 Small Diameter Ball Bearing 15 Needle Roller A
  - 4 Cam Stainless Steel 10 Bush 16 Needle Roller B
  - 5 Cylinder Cover Resin 11 Piston Seal 17 Cylinder Seal
  - 6 Magnet Holder Resin 12 Snap Ring Stainless Steel

### 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 ( )**
HLAG Series  Thin Parallel Hand w/ Rubber Cover(bush type)

Thin and Compact Parallel Hand

Key Features

- **Bush guide**
  Bush guide provides high impact resistance
- **For use in both small and large workpiece handling**
  Low height compact design
  Long motion stroke for multi-purpose use
- **Protective rubber cover for use in dusty and harsh environments**
  Rubber cover to improve protection from harsh environments to repels chips and other particulates such as dust and mist from internal drive mechanism

How To Order

**Standard**
HLAG-12AS

**Size**
- 12AS
- 15AS
- 20AS

**Sensor, Quantity**
- E16: 2 Sensors
- E17: 1 Sensor
- E26: 1 Sensor
- E27: 1 Sensor
- S1: 1 Sensor

**Option**
- HLAG-12AS-GH (HLAG-12AS with oil-resistant (flourubber) cover) with 2 of E16 non-contact reed switches

Internal Structure / Parts & Seals

- **Parts List**
  - No.
  - Name
  - Material
  - No.
  - Name
  - Material
  - 1
  - Body
  - Aluminum
  - 7
  - Guide Rod
  - 8
  - Magnet
  - 9
  - Master-Base Jaw
  - Stainless Steel
  - 10
  - Bush
  - -
  - 11
  - Cylinder Guide
  - Resin
  - 12
  - Piston Seal
  - Snap Ring
  - 13
  - Bush
  - Carbon Steel
  - 14
  - Parallel Pin
  - 15
  - Needle Roller A
  - 16
  - Needle Roller B
  - 17
  - Cylinder Seal

- **Seals List**
  - No.
  - HLAG-12AS
  - MYA-9
  - MYA-11
  - MYA-16
  - 17
  - dia.10×dia.1
  - dia.14×dia.1
  - dia.18×dia.1

Performance Data

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

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<tr>
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<td>15, 20, 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cylinder Diameter</td>
<td>dia.12, dia.15, dia.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Volume Respiration [cm³/line]</td>
<td>1.69, 3.53, 7.85</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatability</td>
<td>±0.03</td>
<td></td>
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<td>Weight</td>
<td>175, 305, 545</td>
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</tbody>
</table>

Hand (c) | Open
Closed (●) |
**HLAG Series** Thin Parallel Hand w/ Rubber Cover (Bush Type)

**HLAG-12AS** (Optimal Grip Force 20N to 50N)

**HLAG-15AS** (Optimal Grip Force 40N to 80N)

**HLAG-20AS** (Optimal Grip Force 80N to 120N)

For CAD data, please go to [1576].

[Diagram of HLAG-12AS Standard]

[Diagram of HLAG-20AS Standard]

[Diagram of HLAG-15AS Standard]
HLAG Series  Thin Parallel Hand w/ Rubber Cover (bush type)

**HLAG-12AS** (Optimal Grip Force 20N to 50N)

**HLAG-12AS Standard**

**HLAG-15AS** (Optimal Grip Force 40N to 80N)

**HLAG-15AS Standard**

**HLAG-20AS** (Optimal Grip Force 80N to 120N)

**HLAG-20AS Standard**