Two dedicated endurance test benches are available in Hengli for various life time test requirements from customer side. During Hengli internal rotary actuator endurance test according to the Hengli standard “Q/HL 001-2016”, the HBM series rotary actuator fully meets all the requirements, no obvious failure or wear is found during appearance inspection and disassembly test after 150,000 cycles of durability test.

Customization service

According to customer and application requirements, the HBM series rotary actuators can be customized with special materials and optimized structure to deal with various even harsh operating conditions. Meanwhile according to the installation positions, tripod and horseshoe mounting frames in different forms can also be customized.

What we provide

- Hydraulic Cylinder
- Hydraulic Piston Pump & Motor
- Hydraulic Control Valve for Mobile Machinery
- Industrial Valve
- Hydraulic Pump Unit and System
- High performance Hydraulic Test Bench
- High precision Casting
- Pneumatic Components and Integrated System
- Cold-drawn Stainless Steel Pipe
- Surface Coating/Thermal Spray Treatment

HBM series rotary actuator is mainly designed for all kinds of aerial work platform. Customized product solutions according to customer requirements for different equipment can also be realized.

HBM Series Rotary Actuator

- Low friction coefficient
- High output torque
- Long service life
- Customization service
The HBM series rotary actuator is independently designed and developed for articulated aerial working platform for arm and platform control. According to customer installation and performance requirement, customized design can be realized accordingly to ensure suitable and flexible operation. Design based on metric unit, unique seal and structure allows a low friction coefficient and high output torque. In addition, the FEA analysis and endurance test contribute to the product stability and reliability. Compared to similar products on the market, the HBM series rotary actuator provides a 5% to 10% higher output torque and requires a 5% lower cracking pressure under same product size, allowing a stable operation with higher efficiency and better cracking pressure, which ultimately guarantees a safe, reliable and efficient working of the aerial working platform.

**Features**

- **Low friction coefficient**

  The key component of the HBM series rotary actuator - the spiral spline for rotation and torque transmission, features in excellent precision, balanced stress distribution and stable transmission. Together with the low-friction axial bearings and a unique sealing system design, the HBM series rotary actuator has a low friction coefficient during transmission process.

- **High output torque**

  Through continuous innovative research and validations, the HBM series rotary actuator is designed in compact structure to make full use of the limit internal space and transmit high output torque via fluid pressure. Compared to similar products on the market, the HBM series rotary actuator provides a 10% to 20% higher output torque under same product size.

- **Long service life**

  In Hengli, comprehensive analysis and calculation on each size of the HBM rotary actuator are implemented in assist of FEA software during design process. Besides, product optimization is continuously carried out to ensure that each size of the product can meet the long service life requirements. Except for normal factory test, two dedicated rotary actuator endurance test benches are available for tests according to customer and application requirements, ensuring excellent durability and long service life.

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**Innovative independent design**

- **Independent intellectual property rights obtained**

**Product Advantage**

- **Low friction coefficient**

**High output torque**

**Long service life**

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**Size and specification**

**Size**

<table>
<thead>
<tr>
<th>Size</th>
<th>80</th>
<th>95</th>
<th>120</th>
<th>140</th>
<th>160</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1(Diameter of bore)</td>
<td>138</td>
<td>166</td>
<td>204</td>
<td>242</td>
<td>280</td>
</tr>
<tr>
<td>D2(Diameter of outer ring)</td>
<td>186</td>
<td>204</td>
<td>232</td>
<td>260</td>
<td>298</td>
</tr>
<tr>
<td>P(Diameter of shaft)</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>P1(Diameter of spline)</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>P2(Diameter of spline)</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

**Size and specification**

| Maximum output torque (Nm) | 626 | 1014 | 2074 | 3337 | 5063 |
| Maximum moment capacity straddle mounting (Nm) | 2540 | 4820 | 11070 | 22600 | 35400 |
| Maximum moment capacity cantilever mounting (Nm) | 1300 | 2490 | 5420 | 11900 | 19900 |
| Radiator (kg) | 1300 | 2118 | 4250 | 9540 | 15920 |
| Axial force (kg) | 500 | 1000 | 1400 | 1400 | 1400 |
| Rotation(*) | 180 | 180 | 180 | 180 | 180 |
| Displacement (cc) | 255 | 255 | 513 | 827 | 1253 |

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**HBM Series Rotary Actuator**

**Note:**

- The above diagrams illustrate the basic specification and show only the basic configuration. Actual drawings and specifications may vary according to customer requirements.