Hydraulic Expansion Clamping Tool

Hydraulic Tool

Available for forming & Inspection by high clamping precision!

Run-out 1μm

- High accurate run-out
- High accurate repetition
- High accurate clamping by one screw operation
- Automation is easily applicable

**Main Specification**

<table>
<thead>
<tr>
<th>Run-out</th>
<th>1~5μm T. I. R. (for Inspection)</th>
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<tbody>
<tr>
<td>Expansion or Contraction</td>
<td>Note Diagram (back-side)</td>
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<tr>
<td>Diameter of Clamping parts</td>
<td>Mandrel 4<del>φ360, Chuck φ3</del>φ300</td>
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<tr>
<td>Operation Mode</td>
<td>Manual or Auto</td>
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<tr>
<td>Accessory</td>
<td>Hex. Bar spanner (for operation screw)</td>
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**Application**

【Hydraulic Mandrel Center Type】

- Inspect a master ring by Hydraulic Mandrel

【Hydraulic Chuck Flange Type】

- Inspect a test piece by Hydraulic Chuck

【Inspect a master ring by Hydraulic Mandrel】

【Inspect a test piece by Hydraulic Chuck】
Influence to the workpiece in Clamping (Direct Clamping)

**Hydraulic Mandrel/Chuck**
Distortion inside a workpiece is extremely less affected when clamping, because the whole circumferential surface of Shell contacts the workpiece.
(The arc per se expands / contracts)

**Scroll Chuck (Claw type)**
The shape of a workpiece is distorted to a triangle by clamping with some claws.

**Collet Chuck**
The shape of a workpiece is distorted to a flower shape by clamping with a divided ring collet.

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**Graph (Expansion & Contraction = EC*)**

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**Main application of Hydraulic tool**

<table>
<thead>
<tr>
<th>Application</th>
<th>Purpose</th>
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</table>
| **Forming Process**  | - Machining Center  
                       | - NC Lathe  
                       | - Special/Exclusive machinery  |
| **Grinding Process** | - Cylindrical grinder  
                       | - Internal grinder  
                       | - Others (Surface grinder/Tool Grinder)  |
| **Assembly**         | - Assembly operation  
                       | - Assembly Devices  |
| **Inspection**       | - Center-surface plate  
                       | - Others (Gear measuring/Exclusive machines)  |

※Please refer to the operation manual in case of the use.