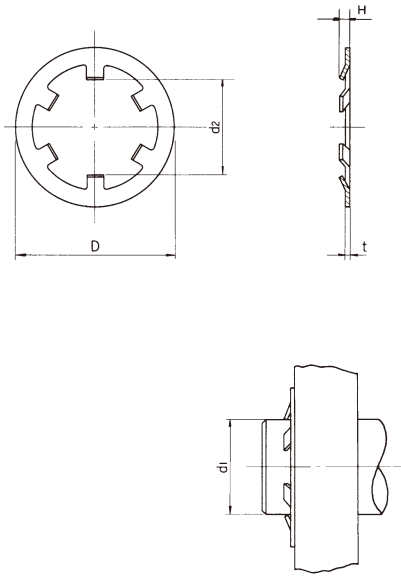


# CA Retaining Rings for Shafts



Unit: mm



| Dimensions Codes | Nominal Diameter | CA Retaining Ring for Shafts Dimensions |           |                 |           |      |      |                 | Thrust Loading N | Applicable Shafts d <sub>1</sub> |           |
|------------------|------------------|---|-----------|-----------------|-----------|------|------|-----------------|------------------|----------------------------------|-----------|
|                  |                  | d <sub>2</sub>                          |           | D               |           | H    | t    | Number of Teeth |                  | Basic Dimension                  | Tolerance |
|                  |                  | Basic Dimension                         | Tolerance | Basic Dimension | Tolerance |      |      |                 |                  |                                  |           |
| 48015            | 1.5              | 1.4                                     | ±0.05     | 5.2             | ±0.2      | 0.6  | 0.25 | 3               | 78               | 1.5                              | ±0.03     |
| 48020            | 2                | 1.9                                     |           | 6               |           | 0.6  | 0.25 | 3               | 118              | 2                                |           |
| 48024            | 2.4              | 2.2                                     | 6.4       | 0.7             |           | 0.25 | 3    | 118             | 2.4              |                                  |           |
| 48030            | 3                | 2.8                                     | 8         | 0.7             |           | 0.25 | 4    | 147             | 3                |                                  |           |
| 48040            | 4                | 3.8                                     | 9         | 0.7             |           | 0.25 | 4    | 177             | 4                |                                  |           |
| 48050            | 5                | 4.8                                     | 10        | 0.7             |           | 0.25 | 5    | 245             | 5                |                                  |           |
| 48060            | 6                | 5.8                                     | 11        | 0.8             |           | 0.25 | 5    | 245             | 6                |                                  |           |
| 48080            | 8                | 7.8                                     | 13        | 0.8             |           | 0.25 | 5    | 294             | 8                |                                  |           |
| 48100            | 10               | 9.8                                     | 15.4      | 0.8             |           | 0.25 | 6    | 294             | 10               |                                  |           |
| 48120            | 12               | 11.8                                    | 17.8      | 1.0             |           | 0.4  | 6    | 343             | 12               | ±0.05                            |           |
| 48160            | 16               | 15.8                                    | 22.8      | 1.0             |           | 0.4  | 6    | 392             | 16               |                                  |           |
| 48180            | 18               | 17.8                                    | 25        | 1.0             |           | 0.4  | 8    | 392             | 18               |                                  |           |
| 48200            | 20               | 19.8                                    | 28        | 1.0             | 0.4       | 8    | 392  | 20              |                  |                                  |           |

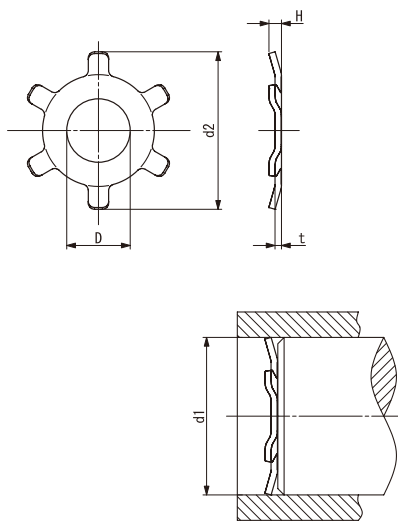
Remarks: 1. Thrust loading is measured with SUS304-CSP.  
2. Thrust loading measured using steel shaft with hardness HV300 or less.  
Notes: Customer-specified dimensions and materials are available upon request.

|              |  |               |  |  |  |
|--------------|--|---------------|--|--|--|
| Product code | <b>148</b>   | Material code | 02...SUS304-CSP<br>70...Spring Steel                 | Part Number Structure (Standardized Product Code)  |  |
| Surface code | 01...Burnished (SUS304-CSP)<br>05...Phosphate Coating (Spring Steel) | Hardness      | HRC37 - 46 (SUS304-CSP)<br>HRC45 - 53 (Spring Steel) | Product: ① ④ ⑧ ○ ○ ○ ○ ○ ○ ○ ○<br>Surface: ○ ○ ○ ○ ○ ○ ○ ○<br>Material: Material      Dimensions code: Dimensions code |  |

# CI Retaining Rings for Holes



Unit: mm



| Dimensions Codes | Nominal Diameter | CI Retaining Rings for Holes Dimensions |           |                 |                 |      |   | Applicable Hole Size d <sub>1</sub> |                 |           |
|------------------|------------------|---|-----------|-----------------|-----------------|------|---|-------------------------------------|-----------------|-----------|
|                  |                  | d <sub>2</sub>                          |           | D               |                 | H    | t | Number of Teeth                     | Basic Dimension | Tolerance |
|                  |                  | Basic Dimension                         | Tolerance | Basic Dimension | Basic Dimension |      |   |                                     |                 |           |
| 49050            | 5                | 5.2                                     | +0.1      | 2.0             | 0.7             | 0.25 | 6 | 5                                   | ±0.03           |           |
| 49060            | 6                | 6.2                                     |           | 2.5             | 0.7             |      |   | 6                                   |                 |           |
| 49080            | 8                | 8.2                                     |           | 3.5             | 0.55            |      |   | 6                                   |                 |           |

|              |                |               |                 |  |  |
|--------------|----------------|---------------|-----------------|--|--|
| Product code | <b>149</b>     | Material code | 02...SUS304-CSP | Part Number Structure (Standardized Product Code)  |  |
| Surface code | 01...Burnished | Hardness      | HRC 37 - 46     | Product: ① ④ ⑨ ⑩ ② ① ○ ○ ○ ○ ○ ○ ○ ○<br>Surface: ○ ○ ○ ○ ○ ○ ○ ○<br>Material: Material      Dimensions code: Dimensions code |  |