

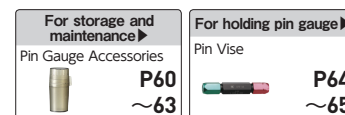
# CERAMIC PIN GAUGE SET CAA • CAG SERIES

JCSS Calibration available  
(CAA series)



HOW TO MOVE

Available from 1pc. Made of highly-durable material with free from rust.



## MATERIAL

- Gauge: Ceramic (Zirconia)

## FEATURES

- Strong against abrasion
- Free from rust and corrosion, and easy maintenance
- Ceramic material is less susceptible to abrasion and aged deterioration than steel
- Non-magnetic
- For above 1.50mm, Nominal size is laser marked on gauge
- Individual pin gauges are also available (plastic case included for CAA series)

## Comparison between carbide and steel materials

| Material                         |                     | Ceramics (Zirconia) | Cemented Carbide | Steel   |
|----------------------------------|---------------------|---------------------|------------------|---------|
| Item                             |                     |                     |                  |         |
| Specific Gravity                 |                     | 6                   | 14.8             | 7.8     |
| Hardness                         | HV                  | 1,250               | 1,300            | 650~720 |
| Bending strength                 | MPa                 | 1,000               | 1,960            | 1,960   |
| Young's Modulus                  | GPa                 | 200                 | 610              | 205     |
| Coefficient of thermal expansion | 10 <sup>-6</sup> /K | 7~8                 | 5~5.5            | 11      |
| Heat conductivity                | W/m·K               | 3                   | 79.5             | 54.4    |

## CAA series

(0.20 ~ 20.00mm)



## CAG Series (with Handle)

(0.20 ~ 10.00mm)



※CAA series Pin Gauge with plastic handle

## SPECIFICATIONS

| Nominal size<br>(mm) | Step<br>(mm) | Length<br>(mm) | Tolerance<br>(μ m) | Out of<br>Roundness<br>(μ m) | Diameter<br>Inequality<br>(μ m) | Hardness<br>(HV)     |
|----------------------|--------------|----------------|--------------------|------------------------------|---------------------------------|----------------------|
| 0.20... 2.99         | 0.01 step    | 38             | ±1                 | 0.8                          | 1.6                             | More<br>than<br>1250 |
| 3.00...10.00         |              | 50             | ±1.5               | 1.3                          | 2.6                             |                      |
| 10.01...20.00        |              |                |                    |                              |                                 |                      |

※ 5mm from each edge is not precision guaranteed

※ Length can be changed without any prior notice due to improvement of product

## SPECIFICATIONS

| Nominal size (mm) | Step (mm) | Length (mm)<br>Gauge Length<br>Overall Length | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV)  |
|-------------------|-----------|-----------------------------------------------|----------------|-----------------------|--------------------------|----------------|
| 0.20... 0.29      | 0.01 step | 3 41                                          | ±1             | 0.8                   | 1.6                      | More than 1250 |
| 0.30... 0.49      |           | 10 48                                         |                |                       |                          |                |
| 0.50... 0.99      |           | 28 66                                         |                |                       |                          |                |
| 1.00... 2.99      |           | 69                                            |                |                       |                          |                |
| 3.00... 4.99      |           | 71                                            |                |                       |                          |                |
| 5.00...10.00      |           | 30 76                                         |                |                       |                          |                |

※ 5mm from each edge is not precision guaranteed

※ Length can be changed without any prior notice due to improvement of product

(0.01mm step)

| Model No. | Nominal size (mm)      | Pins per set | Weight (Including case) |
|-----------|------------------------|--------------|-------------------------|
| CAA-0B    | 0.50•0.51•0.52... 1.00 | 51           | 0.98kg                  |
| CAA-1A    | 1.00•1.01•1.02... 1.50 | 51           | 0.99kg                  |
| CAA-1B    | 1.50•1.51•1.52... 2.00 | 51           | 1.01kg                  |
| CAA-2A    | 2.00•2.01•2.02... 2.50 | 51           | 1.02kg                  |
| CAA-2B    | 2.50•2.51•2.52... 3.00 | 51           | 1.05kg                  |
| CAA-3A    | 3.00•3.01•3.02... 3.50 | 51           | 1.11kg                  |
| CAA-3B    | 3.50•3.51•3.52... 4.00 | 51           | 1.15kg                  |
| CAA-4A    | 4.00•4.01•4.02... 4.50 | 51           | 1.20kg                  |
| CAA-4B    | 4.50•4.51•4.52... 5.00 | 51           | 1.25kg                  |
| CAA-5A    | 5.00•5.01•5.02... 5.50 | 51           | 1.31kg                  |
| CAA-5B    | 5.50•5.51•5.52... 6.00 | 51           | 1.38kg                  |
| CAA-6A    | 6.00•6.01•6.02... 6.50 | 51           | 1.45kg                  |
| CAA-6B    | 6.50•6.51•6.52... 7.00 | 51           | 1.53kg                  |
| CAA-7A    | 7.00•7.01•7.02... 7.50 | 51           | 2.09kg                  |
| CAA-7B    | 7.50•7.51•7.52... 8.00 | 51           | 2.18kg                  |
| CAA-8A    | 8.00•8.01•8.02... 8.50 | 51           | 2.28kg                  |
| CAA-8B    | 8.50•8.51•8.52... 9.00 | 51           | 2.38kg                  |
| CAA-9A    | 9.00•9.01•9.02... 9.50 | 51           | 2.49kg                  |
| CAA-9B    | 9.50•9.51•9.52...10.00 | 51           | 2.60kg                  |

(0.01mm step)

| Model No. | Nominal size (mm)      | Pins per set | Weight (Including case) |
|-----------|------------------------|--------------|-------------------------|
| CAG-0B    | 0.50•0.51•0.52... 1.00 | 51           | 0.98kg                  |
| CAG-1A    | 1.00•1.01•1.02... 1.50 | 51           | 1.07kg                  |
| CAG-1B    | 1.50•1.51•1.52... 2.00 | 51           | 1.08kg                  |
| CAG-2A    | 2.00•2.01•2.02... 2.50 | 51           | 1.10kg                  |
| CAG-2B    | 2.50•2.51•2.52... 3.00 | 51           | 1.12kg                  |
| CAG-3A    | 3.00•3.01•3.02... 3.50 | 51           | 1.18kg                  |
| CAG-3B    | 3.50•3.51•3.52... 4.00 | 51           | 1.22kg                  |
| CAG-4A    | 4.00•4.01•4.02... 4.50 | 51           | 1.27kg                  |
| CAG-4B    | 4.50•4.51•4.52... 5.00 | 51           | 1.33kg                  |
| CAG-5A    | 5.00•5.01•5.02... 5.50 | 51           | 1.71kg                  |
| CAG-5B    | 5.50•5.51•5.52... 6.00 | 51           | 1.78kg                  |
| CAG-6A    | 6.00•6.01•6.02... 6.50 | 51           | 1.85kg                  |
| CAG-6B    | 6.50•6.51•6.52... 7.00 | 51           | 1.93kg                  |
| CAG-7A    | 7.00•7.01•7.02... 7.50 | 51           | 2.01kg                  |
| CAG-7B    | 7.50•7.51•7.52... 8.00 | 51           | 2.10kg                  |
| CAG-8A    | 8.00•8.01•8.02... 8.50 | 51           | 2.25kg                  |
| CAG-8B    | 8.50•8.51•8.52... 9.00 | 51           | 2.35kg                  |
| CAG-9A    | 9.00•9.01•9.02... 9.50 | 51           | 2.46kg                  |
| CAG-9B    | 9.50•9.51•9.52...10.00 | 51           | 2.58kg                  |