



# STEEL PIN GAUGE SET AA series

JCSS Calibration available

T RACEABILITY

## SUB-ZERO Treatment (Cryogenic hardened)



- FEATURES**
- The most popular type.
  - Long life use / Sub zero treatment
  - Individual Pin Gauges are also available
  - Custom made Pin Gauges are available on request
  - Aluminum Pin Vise is included with AA-0A to AA-9B
  - Pin Vise is included with AA-0E to AA-6F
  - For above 1.000mm, the nominal size is marked on gauge

**SPECIFICATIONS**

Nominal Size (mm)	Step (mm)	Length (mm)	Tolerance ( $\mu\text{m}$ )	Out of Roundness/Cylindricity ( $\mu\text{m}$ )	Hardness (HV)
0.05 ... 0.09	0.01 Step	5~10	$\pm 0.5$	0.5	More than 650
0.10 ... 0.19		40			
0.200 ... 0.999	0.001 Step	40	$\pm 0.8$	0.5	
1.000 ... 10.000					
10.01 ... 20.00	0.01 Step	50	$\pm 1.5$	0.8	
20.01 ... 30.00					
30.01 ... 41.00	—	—	$\pm 3$	3.0	

\* 30.01 ~ 41.00 are custom made

### AA series

(0.010mm step)

Model No.	Nominal Size (mm)	Pins per set	Aluminum Pin Vise
AA-00	0.06 · 0.07 · 0.08 ····· 0.290	24	
AA-0A	0.200 · 0.210 · 0.220 ····· 0.500	31	APV-0A
AA-0B	0.500 · 0.510 · 0.520 ····· 1.000	51	APV-0B
AA-1A	1.000 · 1.010 · 1.020 ····· 1.500	51	APV-1A
AA-1B	1.500 · 1.510 · 1.520 ····· 2.000	51	APV-1B
AA-2A	2.000 · 2.010 · 2.020 ····· 2.500	51	APV-2A
AA-2B	2.500 · 2.510 · 2.520 ····· 3.000	51	APV-2B
AA-3A	3.000 · 3.010 · 3.020 ····· 3.500	51	APV-3A
AA-3B	3.500 · 3.510 · 3.520 ····· 4.000	51	APV-3B
AA-4A	4.000 · 4.010 · 4.020 ····· 4.500	51	APV-4A
AA-4B	4.500 · 4.510 · 4.520 ····· 5.000	51	APV-4B
AA-5A	5.000 · 5.010 · 5.020 ····· 5.500	51	APV-5A
AA-5B	5.500 · 5.510 · 5.520 ····· 6.000	51	APV-5B
AA-6A	6.000 · 6.010 · 6.020 ····· 6.500	51	APV-6A
AA-6B	6.500 · 6.510 · 6.520 ····· 7.000	51	APV-6B
AA-7A	7.000 · 7.010 · 7.020 ····· 7.500	51	APV-7A
AA-7B	7.500 · 7.510 · 7.520 ····· 8.000	51	APV-7B
AA-8A	8.000 · 8.010 · 8.020 ····· 8.500	51	APV-8A
AA-8B	8.500 · 8.510 · 8.520 ····· 9.000	51	APV-8B
AA-9A	9.000 · 9.010 · 9.020 ····· 9.500	51	APV-9A
AA-9B	9.500 · 9.510 · 9.520 ····· 10.000	51	APV-9B
AA-10A	10.000 · 10.01 · 10.02 ····· 10.50	51	
AA-10B	10.50 · 10.51 · 10.52 ····· 11.00	51	
AA-11A	11.00 · 11.01 · 11.02 ····· 11.50	51	
AA-11B	11.50 · 11.51 · 11.52 ····· 12.00	51	
AA-12A	12.00 · 12.01 · 12.02 ····· 12.50	51	
AA-12B	12.50 · 12.51 · 12.52 ····· 13.00	51	
AA-13A	13.00 · 13.01 · 13.02 ····· 13.50	51	
AA-13B	13.50 · 13.51 · 13.52 ····· 14.00	51	
AA-14A	14.00 · 14.01 · 14.02 ····· 14.50	51	
AA-14B	14.50 · 14.51 · 14.52 ····· 15.00	51	
AA-15A	15.00 · 15.01 · 15.02 ····· 15.50	51	
AA-15B	15.50 · 15.51 · 15.52 ····· 16.00	51	
AA-16A	16.00 · 16.01 · 16.02 ····· 16.50	51	
AA-16B	16.50 · 16.51 · 16.52 ····· 17.00	51	
AA-17A	17.00 · 17.01 · 17.02 ····· 17.50	51	
AA-17B	17.50 · 17.51 · 17.52 ····· 18.00	51	
AA-18A	18.00 · 18.01 · 18.02 ····· 18.50	51	
AA-18B	18.50 · 18.51 · 18.52 ····· 19.00	51	
AA-19A	19.00 · 19.01 · 19.02 ····· 19.50	51	
AA-19B	19.50 · 19.51 · 19.52 ····· 20.00	51	

### AA series

(0.005mm step)

Model No.	Nominal Size (mm)	Pins per set	Pin Vise
AA-0E	0.500 · 0.505 · 0.510 ····· 0.750	51	PV-0B
AA-0F	0.750 · 0.755 · 0.760 ····· 1.000	51	PV-0B
AA-1C	1.000 · 1.005 · 1.010 ····· 1.250	51	PV-1A
AA-1D	1.250 · 1.255 · 1.260 ····· 1.500	51	PV-1A
AA-1E	1.500 · 1.505 · 1.510 ····· 1.750	51	PV-1B
AA-1F	1.750 · 1.755 · 1.760 ····· 2.000	51	PV-1B
AA-2C	2.000 · 2.005 · 2.010 ····· 2.250	51	PV-2A
AA-2D	2.250 · 2.255 · 2.260 ····· 2.500	51	PV-2A
AA-2E	2.500 · 2.505 · 2.510 ····· 2.750	51	PV-2B
AA-2F	2.750 · 2.755 · 2.760 ····· 3.000	51	PV-2B
AA-3C	3.000 · 3.005 · 3.010 ····· 3.250	51	PV-3A
AA-3D	3.250 · 3.255 · 3.260 ····· 3.500	51	PV-3A
AA-3E	3.500 · 3.505 · 3.510 ····· 3.750	51	PV-3B
AA-3F	3.750 · 3.755 · 3.760 ····· 4.000	51	PV-3B
AA-4C	4.000 · 4.005 · 4.010 ····· 4.250	51	PV-4A
AA-4D	4.250 · 4.255 · 4.260 ····· 4.500	51	PV-4A
AA-4E	4.500 · 4.505 · 4.510 ····· 4.750	51	PV-4B
AA-4F	4.750 · 4.755 · 4.760 ····· 5.000	51	PV-4B
AA-5C	5.000 · 5.005 · 5.010 ····· 5.250	51	PV-5A
AA-5D	5.250 · 5.255 · 5.260 ····· 5.500	51	PV-5A
AA-5E	5.500 · 5.505 · 5.510 ····· 5.750	51	PV-5B
AA-5F	5.750 · 5.755 · 5.760 ····· 6.000	51	PV-5B
AA-6C	6.000 · 6.005 · 6.010 ····· 6.250	51	PV-6A
AA-6D	6.250 · 6.255 · 6.260 ····· 6.500	51	PV-6A
AA-6E	6.500 · 6.505 · 6.510 ····· 6.750	51	PV-6B
AA-6F	6.750 · 6.755 · 6.760 ····· 7.000	51	PV-6B
AA-7C	7.000 · 7.005 · 7.010 ····· 7.250	51	
AA-7D	7.250 · 7.255 · 7.260 ····· 7.500	51	
AA-7E	7.500 · 7.505 · 7.510 ····· 7.750	51	
AA-7F	7.750 · 7.755 · 7.760 ····· 8.000	51	
AA-8C	8.000 · 8.005 · 8.010 ····· 8.250	51	
AA-8D	8.250 · 8.255 · 8.260 ····· 8.500	51	
AA-8E	8.500 · 8.505 · 8.510 ····· 8.750	51	
AA-8F	8.750 · 8.755 · 8.760 ····· 9.000	51	
AA-9C	9.000 · 9.005 · 9.010 ····· 9.250	51	
AA-9D	9.250 · 9.255 · 9.260 ····· 9.500	51	
AA-9E	9.500 · 9.505 · 9.510 ····· 9.750	51	
AA-9F	9.750 · 9.755 · 9.760 ····· 10.000	51	

BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

## High precision quality pin gauge SUB-ZERO TREATMENT (Cryogenic hardened)



### SPECIFICATIONS

Nominal Size (mm)	Step (mm)	Length (mm)	Tolerance (μm)	Out of Roundness (μm)	Out of Cylindricity (μm)	Hardness (HV)
0.100... 0.199	0.001 step	40	±0.3	0.3	0.3	More than 650
0.200... 0.999						
1.000... 7.000		50				
7.001... 7.010						
7.011...10.000						

BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

### FEATURES • High precision quality pin gauge

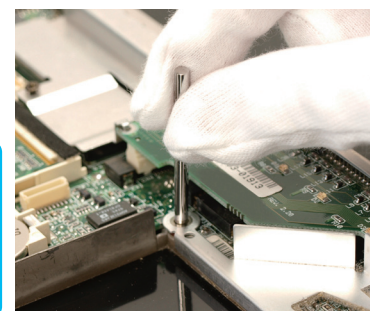
Model No.	Nominal size (mm)	Pins per set
SA-03	0.297 ..... 0.310	14
SA-04	0.397 ..... 0.410	14
SA-05	0.497 ..... 0.510	14
SA-06	0.597 ..... 0.610	14
SA-07	0.697 ..... 0.710	14
SA-08	0.797 ..... 0.810	14
SA-09	0.897 ..... 0.910	14
SA-10	0.997 ..... 1.010	14
SA-11	1.097 ..... 1.110	14
SA-12	1.197 ..... 1.210	14
SA-13	1.297 ..... 1.310	14
SA-14	1.397 ..... 1.410	14
SA-15	1.497 ..... 1.510	14
SA-16	1.597 ..... 1.610	14
SA-17	1.697 ..... 1.710	14
SA-18	1.797 ..... 1.810	14
SA-19	1.897 ..... 1.910	14
SA-20	1.997 ..... 2.010	14
SA-21	2.097 ..... 2.110	14
SA-22	2.197 ..... 2.210	14
SA-23	2.297 ..... 2.310	14
SA-24	2.397 ..... 2.410	14
SA-25	2.497 ..... 2.510	14
SA-26	2.597 ..... 2.610	14
SA-27	2.697 ..... 2.710	14
SA-28	2.797 ..... 2.810	14
SA-29	2.897 ..... 2.910	14
SA-30	2.997 ..... 3.010	14
SA-31	3.097 ..... 3.110	14
SA-32	3.197 ..... 3.210	14
SA-33	3.297 ..... 3.310	14
SA-34	3.397 ..... 3.410	14
SA-35	3.497 ..... 3.510	14
SA-36	3.597 ..... 3.610	14

(0.001mm step)

Model No.	Nominal size (mm)	Pins per set
SA-37	3.697 ..... 3.710	14
SA-38	3.797 ..... 3.810	14
SA-39	3.897 ..... 3.910	14
SA-40	3.997 ..... 4.010	14
SA-41	4.097 ..... 4.110	14
SA-42	4.197 ..... 4.210	14
SA-43	4.297 ..... 4.310	14
SA-44	4.397 ..... 4.410	14
SA-45	4.497 ..... 4.510	14
SA-46	4.597 ..... 4.610	14
SA-47	4.697 ..... 4.710	14
SA-48	4.797 ..... 4.810	14
SA-49	4.897 ..... 4.910	14
SA-50	4.997 ..... 5.010	14
SA-51	5.097 ..... 5.110	14
SA-52	5.197 ..... 5.210	14
SA-53	5.297 ..... 5.310	14
SA-54	5.397 ..... 5.410	14
SA-55	5.497 ..... 5.510	14
SA-56	5.597 ..... 5.610	14
SA-57	5.697 ..... 5.710	14
SA-58	5.797 ..... 5.810	14
SA-59	5.897 ..... 5.910	14
SA-60	5.997 ..... 6.010	14
SA-61	6.097 ..... 6.110	14
SA-62	6.197 ..... 6.210	14
SA-63	6.297 ..... 6.310	14
SA-64	6.397 ..... 6.410	14
SA-65	6.497 ..... 6.510	14
SA-66	6.597 ..... 6.610	14
SA-67	6.697 ..... 6.710	14
SA-68	6.797 ..... 6.810	14
SA-69	6.897 ..... 6.910	14
SA-70	6.997 ..... 7.010	14



For checking of shallow holes, for those concerned about gauge wear  
**SUB-ZERO TREATMENT (Cryogenic hardened)**



- FEATURES**
- Wear-line on both ends of pin gauge, able to see gauge wear.
  - When line disappears, wear is more than about 1µm
  - Individual pin gauges are also available

Set No.

Set No.	Nominal Size (mm)	Step (mm)	Pins per Set	Aluminum Pin vise
AML-3A	3.000 · 3.010 · 3.020 ····· 3.500	0.010 step	51	APV-3A
AML-3B	3.500 · 3.510 · 3.520 ····· 4.000		51	APV-3B
AML-4A	4.000 · 4.010 · 4.020 ····· 4.500		51	APV-4A
AML-4B	4.500 · 4.510 · 4.520 ····· 5.000		51	APV-4B
AML-5A	5.000 · 5.010 · 5.020 ····· 5.500		51	APV-5A
AML-5B	5.500 · 5.510 · 5.520 ····· 6.000		51	APV-5B
AML-6A	6.000 · 6.010 · 6.020 ····· 6.500		51	APV-6A
AML-6B	6.500 · 6.510 · 6.520 ····· 7.000		51	APV-6B
AML-7A	7.000 · 7.010 · 7.020 ····· 7.500		51	APV-7A
AML-7B	7.500 · 7.510 · 7.520 ····· 8.000		51	APV-7B
AML-8A	8.000 · 8.010 · 8.020 ····· 8.500		51	APV-8A
AML-8B	8.500 · 8.510 · 8.520 ····· 9.000		51	APV-8B
AML-9A	9.000 · 9.010 · 9.020 ····· 9.500		51	APV-9A
AML-9B	9.500 · 9.510 · 9.520 ····· 10.000		51	APV-9B

**SPECIFICATIONS**

Size (mm)	Step (mm)	Length (mm)	Tolerance (µm)	Roundness (µm)	Cylindricity (µm)	Hardness (HV)
3.00 ... 3.99	0.010 step	50	±0.8	0.5	0.5	More than 650
4.00 ... 4.99						
5.00 ... 6.00						
6.01 ... 6.99						
7.00 ... 7.99						
8.00 ... 8.99						
9.00 ... 10.00						

0.001 step pin gauges are also available on request. (Please contact us with request)

**SUB-ZERO TREATMENT (Cryogenic hardened)**



**FEATURES**

- For high use applications
- Same specifications as AA series
- Custom made Pin Gauge sets are available on request  
※ Pin Vise is not included

**AP series**

(0.100mm step)

Model No.	Nominal size (mm)	Pin per set
AP-1	1.000 • 1.100 • 1.200 ..... 5.000	41
AP-2	5.000 • 5.100 • 5.200 ..... 10.000	51
AP-3	10.000 • 10.10 • 10.20 ..... 15.00	51
AP-4	15.00 • 15.10 • 15.20 ..... 20.00	51

**AS series**

(0.010mm step)

Consist of Pin Gauge in the range of ± 0.05mm based on integer number size.

Model No.	Nominal size (mm)	Pin per set
AS-1	0.950 • 0.960 ..... 1.000 ..... 1.040 • 1.050	55
	1.950 • 1.960 ..... 2.000 ..... 2.040 • 2.050	
	2.950 • 2.960 ..... 3.000 ..... 3.040 • 3.050	
	3.950 • 3.960 ..... 4.000 ..... 4.040 • 4.050	
AS-2	4.950 • 4.960 ..... 5.000 ..... 5.040 • 5.050	55
	5.950 • 5.960 ..... 6.000 ..... 6.040 • 6.050	
	6.950 • 6.960 ..... 7.000 ..... 7.040 • 7.050	
	7.950 • 7.960 ..... 8.000 ..... 8.040 • 8.050	
AS-3	8.950 • 8.960 ..... 9.000 ..... 9.040 • 9.050	55
	9.950 • 9.960 ..... 10.000 ..... 10.04 • 10.05	
	10.95 • 10.96 ..... 11.00 ..... 11.04 • 11.05	
	11.95 • 11.96 ..... 12.00 ..... 12.04 • 12.05	
AS-4	12.95 • 12.96 ..... 13.00 ..... 13.04 • 13.05	55
	13.95 • 13.96 ..... 14.00 ..... 14.04 • 14.05	
	14.95 • 14.96 ..... 15.00 ..... 15.04 • 15.05	
	15.95 • 15.96 ..... 16.00 ..... 16.04 • 16.05	
ASP-1	16.95 • 16.96 ..... 17.00 ..... 17.04 • 17.05	55
	17.95 • 17.96 ..... 18.00 ..... 18.04 • 18.05	
	18.95 • 18.96 ..... 19.00 ..... 19.04 • 19.05	
	19.95 • 19.96 ..... 20.00 ..... 20.04 • 20.05	
ASP-2	0.450 • 0.460 ..... 0.500 ..... 0.540 • 0.550	55
	1.450 • 1.460 ..... 1.500 ..... 1.540 • 1.550	
	2.450 • 2.460 ..... 2.500 ..... 2.540 • 2.550	
	3.450 • 3.460 ..... 3.500 ..... 3.540 • 3.550	
ASP-3	4.450 • 4.460 ..... 4.500 ..... 4.540 • 4.550	55
	5.450 • 5.460 ..... 5.500 ..... 5.540 • 5.550	
	6.450 • 6.460 ..... 6.500 ..... 6.540 • 6.550	
	7.450 • 7.460 ..... 7.500 ..... 7.540 • 7.550	
ASP-4	8.450 • 8.460 ..... 8.500 ..... 8.540 • 8.550	55
	9.450 • 9.460 ..... 9.500 ..... 9.540 • 9.550	
	10.45 • 10.46 ..... 10.50 ..... 10.54 • 10.55	
	11.45 • 11.46 ..... 11.50 ..... 11.54 • 11.55	
ASP-5	12.45 • 12.46 ..... 12.50 ..... 12.54 • 12.55	55
	13.45 • 13.46 ..... 13.50 ..... 13.54 • 13.55	
	14.45 • 14.46 ..... 14.50 ..... 14.54 • 14.55	
	15.45 • 15.46 ..... 15.50 ..... 15.54 • 15.55	
ASP-6	16.45 • 16.46 ..... 16.50 ..... 16.54 • 16.55	55
	17.45 • 17.46 ..... 17.50 ..... 17.54 • 17.55	
	18.45 • 18.46 ..... 18.50 ..... 18.54 • 18.55	
	19.45 • 19.46 ..... 19.50 ..... 19.54 • 19.55	

**AH series**

(0.050mm step)

Model No.	Nominal size (mm)	Pin per set
AH-0	0.200 • 0.250 • 0.300 ... 1.000	17
AH-1	1.000 • 1.050 • 1.100 ... 3.500	51
AH-2	3.500 • 3.550 • 3.600 ... 6.000	51
AH-3	6.000 • 6.050 • 6.100 ... 8.500	51
AH-4	8.500 • 8.550 • 8.600 ... 11.00	51
AH-5	11.00 • 11.05 • 11.10 ... 13.50	51
AH-6	13.50 • 13.55 • 13.60 ... 16.00	51
AH-7	16.00 • 16.05 • 16.10 ... 18.50	51
AH-8	18.50 • 18.55 • 18.60 ... 20.00	31

**AAP Series**

(0.010mm step)

Consist of intermediate nominal size Pin Gauges of AA Series.

Model No.	Nominal size (mm)	Pin per set
AAP-0B	0.505 • 0.515 • 0.525... 1.005	51
AAP-1A	1.005 • 1.015 • 1.025... 1.505	51
AAP-1B	1.505 • 1.515 • 1.525... 2.005	51
AAP-2A	2.005 • 2.015 • 2.025... 2.505	51
AAP-2B	2.505 • 2.515 • 2.525... 3.005	51
AAP-3A	3.005 • 3.015 • 3.025... 3.505	51
AAP-3B	3.505 • 3.515 • 3.525... 4.005	51
AAP-4A	4.005 • 4.015 • 4.025... 4.505	51
AAP-4B	4.505 • 4.515 • 4.525... 5.005	51
AAP-5A	5.005 • 5.015 • 5.025... 5.505	51
AAP-5B	5.505 • 5.515 • 5.525... 6.005	51
AAP-6A	6.005 • 6.015 • 6.025... 6.505	51
AAP-6B	6.505 • 6.515 • 6.525... 7.005	51
AAP-7A	7.005 • 7.015 • 7.025... 7.505	51
AAP-7B	7.505 • 7.515 • 7.525... 8.005	51
AAP-8A	8.005 • 8.015 • 8.025... 8.505	51
AAP-8B	8.505 • 8.515 • 8.525... 9.005	51
AAP-9A	9.005 • 9.015 • 9.025... 9.505	51
AAP-9B	9.505 • 9.515 • 9.525... 10.005	51

BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

# STEEL PIN GAUGE SET PM • PG series



## SUB-ZERO TREATMENT (Cryogenic hardened)

### PM series ⊕ ⊖

- FEATURES**
- Pin Gauges with tolerance of 0 to plus 2 $\mu$ m or 0 to minus 2 $\mu$ m based on nominal size
  - For over 1.000mm, nominal size and P(for Plus) or M(for Minus) is marked on gagues
  - Please indicate "plus" or "minus" when ordering
  - Individual Pin Gauges are also available



### PG series ⊕ ⊖

- FEATURES**
- Pin Gauges with tolerance of +2 to +5 $\mu$ m (or -2 to -5 $\mu$ m) based on nominal size
  - Please indicate "plus" or "minus" when ordering
  - Individual Pin Gauges are also available



※ Pin Vise is not included  
 ※ PG-00 and PG-3 differ in size step

## SPECIFICATIONS

Size (mm)	Step (mm)	Length (mm)	Tolerance ( $\mu$ m)	Out of Roundness/ Cylindricity ( $\mu$ m)	Hardness (HV)
0.20... 0.99	0.01 step	40	Plus or Minus 0~2	1.0	Over 650
1.00...10.00		50			

(0.01mm step)

Model No.	Nominal size (mm)	Pins per set	Pin Vise
PM-0A	0.20 • 0.21 • 0.22.....0.50	31	—
PM-0B	0.50 • 0.51 • 0.52.....1.00	51	PV-0B
PM-1A	1.00 • 1.01 • 1.02..... 1.50	51	PV-1A
PM-1B	1.50 • 1.51 • 1.52..... 2.00	51	PV-1B
PM-2A	2.00 • 2.01 • 2.02.....2.50	51	PV-2A
PM-2B	2.50 • 2.51 • 2.52.....3.00	51	PV-2B
PM-3A	3.00 • 3.01 • 3.02.....3.50	51	PV-3A
PM-3B	3.50 • 3.51 • 3.52.....4.00	51	PV-3B
PM-4A	4.00 • 4.01 • 4.02.....4.50	51	PV-4A
PM-4B	4.50 • 4.51 • 4.52.....5.00	51	PV-4B
PM-5A	5.00 • 5.01 • 5.02.....5.50	51	PV-5A
PM-5B	5.50 • 5.51 • 5.52.....6.00	51	PV-5B
PM-6A	6.00 • 6.01 • 6.02.....6.50	51	PV-6A
PM-6B	6.50 • 6.51 • 6.52.....7.00	51	PV-6B
PM-7A	7.00 • 7.01 • 7.02.....7.50	51	—
PM-7B	7.50 • 7.51 • 7.52.....8.00	51	—
PM-8A	8.00 • 8.01 • 8.02.....8.50	51	—
PM-8B	8.50 • 8.51 • 8.52.....9.00	51	—
PM-9A	9.00 • 9.01 • 9.02.....9.50	51	—
PM-9B	9.50 • 9.51 • 9.52.....10.00	51	—

## SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)	Tolerance ( $\mu$ m)	Out of Roundness/ Cylindricity ( $\mu$ m)	Hardness (HV)
0.100 ... 0.190	0.010 step	20	⊕2~5 based on nominal size	1.5	Over 650
0.200 ... 0.290		40			
0.300 ... 0.975	0.025 step	50	⊖2~5 based on nominal size	1.5	Over 650
1.000 ...12.975					
13.000 ...19.000	0.100 step		※		

※The tolerance of 13.000~19.000 Pin Gauges is with Plus (or Minus) 1~5 $\mu$ m

Model No.	Nominal size	Step	Pins per set
PG-00	0.100• 0.110• 0.120 ... 0.290	0.010 step	20
PG-0	0.300• 0.325• 0.350 ... 1.525	0.025 step	50
PG-1	1.550• 1.575• 1.600 ... 6.275		190
PG-2A	6.300• 6.325• 6.350 ... 9.775		140
PG-2B	9.800• 9.825• 9.850 ...12.525	0.025 step	110
PG-2C	12.550•12.575•12.600 ...12.975		18
PG-3	13.000•13.100•13.200 ...19.000	0.100 step	61

## SUB-ZERO TREATMENT (Cryogenic hardened)



### FEATURES

- Use for measuring gear runout and eccentricity of gear wheels or pulleys can also measure squareness between the hole and side face
- For above 2.00 mm, the Nominal size is marked on gauge

### SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)	Tolerance ( $\mu\text{m}$ )	Out of Roundness ( $\mu\text{m}$ )	Out of Cylindricity ( $\mu\text{m}$ )	Runout Tolerance ( $\mu\text{m}$ )	Center hole Angle	Center hole Diameter (mm)	Hardness (HV)
2.00... 2.99	0.01 step	50	$\pm 2.0$	1.0	1.0	Within 2.0	60°	1.3	More than 650
3.00... 3.99								1.8	
4.00... 4.99								2.4	
5.00... 5.99									
6.00... 6.99									
7.00... 7.99								4.0	
8.00... 8.99									
9.00... 10.00									

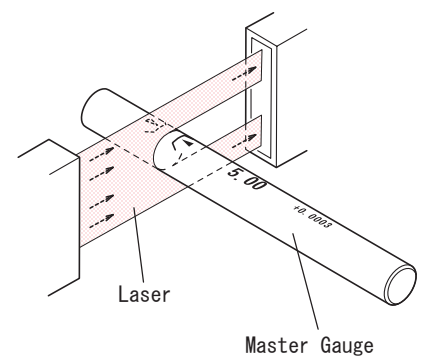
## MASTER GAUGE

Actual value of the specific area is marked on pin gauge

## SUB-ZERO TREATMENT (Cryogenic hardened)



### Example use



Calibrating a laser thickness gauge using the marked area of the master gauge

- ### FEATURES
- Actual value of the specific area is marked on pin gauge

### SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)	Uncertainty ( $\mu\text{m}$ )	Out of Roundness ( $\mu\text{m}$ )	Hardness (HV)
1.00... 4.00	0.01	50	0.4	0.5	More than 650
4.01... 6.00					



## SUB-ZERO TREATMENT (Cryogenic hardened)



BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

- FEATURES**
- AA series Pin Gauge with Plastic handle
  - Easy to handle for measuring
  - Less affected by temperature
  - The handle protects Pin Gauges from skin oil and salts
  - Size is marked on each plastic handle
  - Individual pin gauges are also available

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

### SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)		Tolerance ( $\mu\text{m}$ )	Out of Roundness ( $\mu\text{m}$ )	Out of Cylindricity ( $\mu\text{m}$ )	Hardness (HV)
		Gauge Length	Overall Length				
0.07... 0.09	0.01 step	3	41	$\pm 0.5$	0.5	0.5	More than 650
0.10... 0.19							
0.20... 0.29							
0.30... 0.49		10	48	$\pm 1.0$			
0.50... 0.99		20	58				
1.00... 5.00		30	71				
5.01...10.00	76						

※ Exceptionally, for 1.00mm Pin Gauge in Set No. AG-0B -- Gauge Length: 20mm/ Overall Length: 58mm

(0.01mm step)

Model No.	Nominal size (mm)	Pins per set
AG-0A	0.20·0.21·0.22... 0.50	31
AG-0B	0.50·0.51·0.52... 1.00	51
AG-1A	1.00·1.01·1.02... 1.50	51
AG-1B	1.50·1.51·1.52... 2.00	51
AG-2A	2.00·2.01·2.02... 2.50	51
AG-2B	2.50·2.51·2.52... 3.00	51
AG-3A	3.00·3.01·3.02... 3.50	51
AG-3B	3.50·3.51·3.52... 4.00	51
AG-4A	4.00·4.01·4.02... 4.50	51
AG-4B	4.50·4.51·4.52... 5.00	51
AG-5A	5.00·5.01·5.02... 5.50	51
AG-5B	5.50·5.51·5.52... 6.00	51
AG-6A	6.00·6.01·6.02... 6.50	51
AG-6B	6.50·6.51·6.52... 7.00	51
AG-7A	7.00·7.01·7.02... 7.50	51
AG-7B	7.50·7.51·7.52... 8.00	51
AG-8A	8.00·8.01·8.02... 8.50	51
AG-8B	8.50·8.51·8.52... 9.00	51
AG-9A	9.00·9.01·9.02... 9.50	51
AG-9B	9.50·9.51·9.52...10.00	51

SUB-ZERO TREATMENT (Cryogenic hardened)

FEATURES

- For quick and accurate over-pin diameter measurement of internal and external gears. (magnetize the pin for easy handling)
- OP series gauge is for measuring over pin diameter of gears and involute splines. Each module is a set of 2 pins each for measuring external gear over-pin-diameter, and internal gear over-pin-diameter.
- Individual pin gauges are also available
- Custom made pin gauges are available upon request.

To determine proper pin gauge, please note the following.

- 1) For inside diameter or outside diameter
- 2) Module or diametrical pitch
- 3) Number of teeth
- 4) Pressure angle
- 5) Profile shift coefficient
- 6) Torsion angle

### How To Measure

■ For inside diameter

■ For outside diameter

Over-pin diameter is measured by measuring the diameter after placing two pin gauges in opposite grooves of the gear as shown above.



OP-1

Module (mm)	Inner dia. (hole) pin diameter (V) × groove height (V <sub>i</sub> ) (mm)	Outer (axis) pin diameter (U) (mm)
0.5	1.00 × 0.84	0.90
1.0	2.00 × 1.68	1.80
1.25	2.50 × 2.10 2.40 × 2.00 ※ 1	2.25 —
1.667	3.333 × 2.80	3.00
2.5	5.00 × 4.26	4.50
5.0	10.00 × 8.40	9.00
10.0	20.00 × 16.80	18.00

※1 Module 1.25 is used for tooth 8 · 12

OP-2

Module (mm)	Inner dia.(hole) pin diameter (V) × groove height (V <sub>i</sub> ) (mm)	Outer(axis) pin diameter (U) (mm)
0.75	1.50 × 1.20 —	1.35 1.40 ※ 2
1.5	3.00 × 2.52	2.70
2.0	4.00 × 3.36	3.60
3.0	6.00 × 5.04 ※ 1	5.40
3.75	7.50 × 6.30 —	6.75 7.00 ※ 3
4.5	9.00 × 7.56	8.10
6.0	12.00 × 10.08	10.80
7.5	15.00 × 12.60	13.50

※2 )Module 0.75 is used for tooth 6 · 7 · 8 · 9 · 10 · 11

※3 )Module 3.75 is used for tooth 6 · 7 · 8 · 9 · 10 · 11

OP-3

This is combination set of OP-1 and OP-2

SPECIFICATIONS

Dimensional deviation (V and U)	0.90mm~10.00mm : ±1 μm 10.01mm~20.00mm : ±1.5μm
Out of Roundness/ Cylindricity	0.90mm~10.00mm : ±1 μm 10.01mm~20.00mm : ±1.5μm
Length	50mm
Hardness	Over HV650

BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



# CARBIDE PIN GAUGE SET TAA • TAG series

 JCSS Calibration available  
(TAA series)

## FEATURES

- About 20-30 times more durable than Steel Pin Gauge
- The coefficient of thermal expansion is small (1/2 of steel,  $5 \times 10^{-6} \text{K}^{-1}$ ) so the changes due to temperature are small
- Less likely to be damaged due to high hardness
- Even if broken, dimension does not change (no burrs on broken edges)
- Economical--Periodic calibration is not required

### TAAseries



### TAG series (with Handle)



## SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)	Tolerance ( $\mu\text{m}$ )	Out of Roundness/Cylindricity ( $\mu\text{m}$ )	Hardness (HV)
0.50... 0.99	0.01 step	30	$\pm 1$	0.8	1200
1.00... 2.99		38			
3.00... 10.00		50	$\pm 1.5$	1.3	
10.01... 14.00					

(0.01mm step)

## SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)		Tolerance ( $\mu\text{m}$ )	Out of Roundness/Cylindricity ( $\mu\text{m}$ )	Hardness (HV)
		Gauge Length	Overall Length			
0.50... 0.99	0.01 step	25	63	$\pm 1$	0.8	1200
1.00... 2.99		28	69			
3.00... 4.99		30	71			
5.00... 10.00			76			

(0.01mm step)

Model No.	Nominal size (mm)	Pins per set
TAA-0B	0.50•0.51•0.52... 1.00	51
TAA-1A	1.00•1.01•1.02... 1.50	51
TAA-1B	1.50•1.51•1.52... 2.00	51
TAA-2A	2.00•2.01•2.02... 2.50	51
TAA-2B	2.50•2.51•2.52... 3.00	51
TAA-3A	3.00•3.01•3.02... 3.50	51
TAA-3B	3.50•3.51•3.52... 4.00	51
TAA-4A	4.00•4.01•4.02... 4.50	51
TAA-4B	4.50•4.51•4.52... 5.00	51
TAA-5A	5.00•5.01•5.02... 5.50	51
TAA-5B	5.50•5.51•5.52... 6.00	51
TAA-6A	6.00•6.01•6.02... 6.50	51
TAA-6B	6.50•6.51•6.52... 7.00	51
TAA-7A	7.00•7.01•7.02... 7.50	51
TAA-7B	7.50•7.51•7.52... 8.00	51
TAA-8A	8.00•8.01•8.02... 8.50	51
TAA-8B	8.50•8.51•8.52... 9.00	51
TAA-9A	9.00•9.01•9.02... 9.50	51
TAA-9B	9.50•9.51•9.52... 10.00	51

Model No.	Nominal size (mm)	Pins per set
TAG-0B	0.50•0.51•0.52... 1.00	51
TAG-1A	1.00•1.01•1.02... 1.50	51
TAG-1B	1.50•1.51•1.52... 2.00	51
TAG-2A	2.00•2.01•2.02... 2.50	51
TAG-2B	2.50•2.51•2.52... 3.00	51
TAG-3A	3.00•3.01•3.02... 3.50	51
TAG-3B	3.50•3.51•3.52... 4.00	51
TAG-4A	4.00•4.01•4.02... 4.50	51
TAG-4B	4.50•4.51•4.52... 5.00	51
TAG-5A	5.00•5.01•5.02... 5.50	51
TAG-5B	5.50•5.51•5.52... 6.00	51
TAG-6A	6.00•6.01•6.02... 6.50	51
TAG-6B	6.50•6.51•6.52... 7.00	51
TAG-7A	7.00•7.01•7.02... 7.50	51
TAG-7B	7.50•7.51•7.52... 8.00	51
TAG-8A	8.00•8.01•8.02... 8.50	51
TAG-8B	8.50•8.51•8.52... 9.00	51
TAG-9A	9.00•9.01•9.02... 9.50	51
TAG-9B	9.50•9.51•9.52... 10.00	51

## FEATURES

- Strong against abrasion
- Free from rust and corrosion, and easy maintenance
- Ceramic material is less susceptible to abrasion and age deterioration than steel
- Non-magnetic
- For above 1.50mm, Nominal size is laser marked on gauge

## Comparison between carbide and steel materials

Item	Material	Ceramics		Cemented Carbide (G2)	Steel (SKH)
		φ0.50~φ2.49	φ2.50~φ10.00		
Specific Gravity		5.5~6.0	3.6~3.9	14.8	7.8
Hardness	HV	1,200	1,800	1,200	730(Harden)
Bending strength	GPa	2.4~7.9	3.1~3.5	22	110~180
Young's Modulus	GPa	180~240	310~370	610	205
Coefficient of thermal expansion	10 <sup>-6</sup> /K	10.5	8	5	11
Heat conductivity	W/m·K	2	20~30	80	76

## CAA series



## CAG Series (with Handle)



※CAA series Pin Gauge with plastic handle.

## SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)	Tolerance (μm)	Out of Roundness/ Cylindricity (μm)
0.50...2.49	0.01 step	38	±1	0.8
2.50...2.99				
3.00...3.49				
3.50...9.99				
10.00	—	50		

※ Length can be changed without any prior notice due to improvement of product.  
(0.01mm step)

Model No.	Nominal size (mm)	Pins per set
CAA-0B	0.50•0.51•0.52... 1.00	51
CAA-1A	1.00•1.01•1.02... 1.50	51
CAA-1B	1.50•1.51•1.52... 2.00	51
CAA-2A	2.00•2.01•2.02... 2.50	51
CAA-2B	2.50•2.51•2.52... 3.00	51
CAA-3A	3.00•3.01•3.02... 3.50	51
CAA-3B	3.50•3.51•3.52... 4.00	51
CAA-4A	4.00•4.01•4.02... 4.50	51
CAA-4B	4.50•4.51•4.52... 5.00	51
CAA-5A	5.00•5.01•5.02... 5.50	51
CAA-5B	5.50•5.51•5.52... 6.00	51
CAA-6A	6.00•6.01•6.02... 6.50	51
CAA-6B	6.50•6.51•6.52... 7.00	51
CAA-7A	7.00•7.01•7.02... 7.50	51
CAA-7B	7.50•7.51•7.52... 8.00	51
CAA-8A	8.00•8.01•8.02... 8.50	51
CAA-8B	8.50•8.51•8.52... 9.00	51
CAA-9A	9.00•9.01•9.02... 9.50	51
CAA-9B	9.50•9.51•9.52...10.00	51

## SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)		Tolerance (μm)	Out of Roundness/ Cylindricity (μm)
		Gauge Length	Overall Length		
0.50... 0.99	0.01 step	28	66	±1	0.8
1.00... 3.49		28	69		
3.50... 4.99		30	71		
5.00...10.00		30	76		

※ Length can be changed without any prior notice due to improvement of product.  
(0.01mm step)

Model No.	Nominal size (mm)	Pins per set
CAG-0B	0.50•0.51•0.52... 1.00	51
CAG-1A	1.00•1.01•1.02... 1.50	51
CAG-1B	1.50•1.51•1.52... 2.00	51
CAG-2A	2.00•2.01•2.02... 2.50	51
CAG-2B	2.50•2.51•2.52... 3.00	51
CAG-3A	3.00•3.01•3.02... 3.50	51
CAG-3B	3.50•3.51•3.52... 4.00	51
CAG-4A	4.00•4.01•4.02... 4.50	51
CAG-4B	4.50•4.51•4.52... 5.00	51
CAG-5A	5.00•5.01•5.02... 5.50	51
CAG-5B	5.50•5.51•5.52... 6.00	51
CAG-6A	6.00•6.01•6.02... 6.50	51
CAG-6B	6.50•6.51•6.52... 7.00	51
CAG-7A	7.00•7.01•7.02... 7.50	51
CAG-7B	7.50•7.51•7.52... 8.00	51
CAG-8A	8.00•8.01•8.02... 8.50	51
CAG-8B	8.50•8.51•8.52... 9.00	51
CAG-9A	9.00•9.01•9.02... 9.50	51
CAG-9B	9.50•9.51•9.52...10.00	51

BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



# PIN GAUGE ACCESSORIES

BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

## PLASTIC CASE



Removable lid for use as tray



Stands



Stacks



## WOODEN CASE



### W-3 (For PG)

W-3A	<ul style="list-style-type: none"> <li>■ STEEL</li> <li>PG-1 ⊕ ⊖</li> <li>PG-2A ⊕ ⊖</li> <li>PG-2B ⊕ ⊖</li> </ul>
W-3B	<ul style="list-style-type: none"> <li>■ STEEL</li> <li>PG-3 ⊕ ⊖</li> </ul>

### W-4 (AG·Small)

- STEEL
- AG-0A ~ AG-4B
- CARBIDE
- TAG-0A ~ TAG-4B
- CERAMIC PIN GAUGE SET with handle
- CAG-0A ~ CAG-4B

### W-5 (AG·Large)

- STEEL
- AG-5A ~ AG-9B
- CARBIDE
- TAG-5A ~ TAG-9B
- CERAMIC PIN GAUGE
- CAG-5A ~ CAG-9B

### W-6 (For L)

55slot

### W-9 (For LL)

30slot

PCS-1 (AA·Small)
<ul style="list-style-type: none"> <li>■ STEEL</li> <li>AA-00 ~ AA-6B</li> <li>AH-0 ~ AH-2</li> <li>AP-1</li> <li>AA-0E ~ AA-6F</li> <li>AAP-0B ~ AAP-6A</li> <li>PG-00 ⊕ ⊖</li> <li>PG-0 ⊕ ⊖</li> <li>PM-0B ⊕ ⊖ ~ PM-6B ⊕ ⊖</li> <li>■ CARBIDE</li> <li>TAA-0B ~ TAA-6B</li> <li>■ CAA series</li> <li>CAA-0B ~ CAA-6B</li> </ul>

PCS-2 (AA·Large)
<ul style="list-style-type: none"> <li>■ STEEL</li> <li>AA-7A ~ AA-15B</li> <li>AH-3 ~ AH-6</li> <li>AP-2 ~ AP-3</li> <li>AA-7C ~ AA-9F</li> <li>AAP-6B ~ AAP-9B</li> <li>PG-2C ⊕ ⊖</li> <li>PM-7A ⊕ ⊖</li> <li>~ PM-9B ⊕ ⊖</li> <li>■ CARBIDE</li> <li>TAA-7A ~ TAA-9B</li> <li>■ CAA series</li> <li>CAA-7A ~ CAA-9B</li> </ul>

PCS-2W (AA·Extra-Large)
<ul style="list-style-type: none"> <li>■ STEEL</li> <li>AA-16A ~ AA-19B</li> <li>AH-7 ~ AH-8</li> <li>AP-4</li> </ul>

## PLASTIC CASE for individual pin gauge



### For Steel Pin Gauge

LL	L	M	S
22.00 ~ 30.00mm	16.00 ~ 22.00mm	7.000 ~ 15.99mm (16.00mm for AA-15B)	0.06 ~ 6.999mm (7.000mm for AA-6B)



### For Carbide Pin Gauge

M	S
7.00 ~ 14.00mm	0.50 ~ 6.99mm (7.00mm for CAA-6B)

### For Ceramic Pin Gauge

M	S
7.00 ~ 10.00mm	0.50 ~ 6.99mm (7.00mm for CAA-6B)

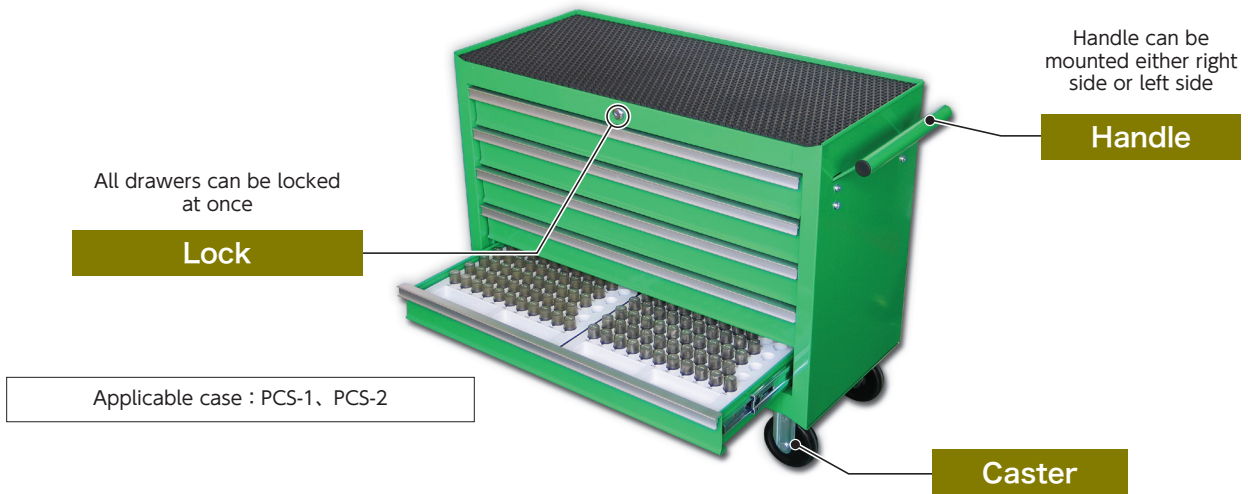
### For Maintenance Line Pin Gauge

M	S
7.00 ~ 10.00mm	3.000 ~ 6.99mm (7.000mm for AML-6B)

# PIN GAUGE CABINET P-5C



Pin gauge storage cabinet can store up to 10 pin gauge sets



**USE** • For storage of pin gauge set

**MATERIALS**

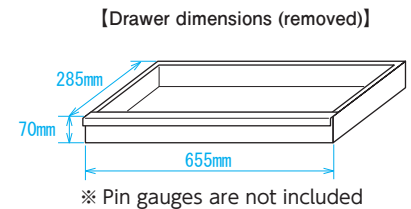
- SPCC (cold rolled steel)

**FEATURES**

- Deep drawer can store SK pin gauge carrying case

**SPECIFICATION**

- Applicable case: PCS-1, PCS-2
- ※Remove the cover case when storing
- Number of drawers: 5
- (2 sets each drawer, total of 10 sets can be stored.)



BLOCK GAUGES

PIN GAUGES

PIN GAUGE ACCESSORIES

PIN VISE

Order No.	Model No.	Product Dimensions (mm)	Weight
217930	P-5C	W655×D350×H630	36kg

## MAINTENANCE KIT



GAUGES

RING GAUGES

PLUG GAUGES

LIMIT GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

**USE** • For pin gauge maintenance

**FEATURES** • Plastic case for easy to carry