

114p



115p



116p



117p



118p



119p



120p



121p



122p



122p



123p



124p



125p



126p



127p



127p



127p



127p



128p

GAUGES



129p



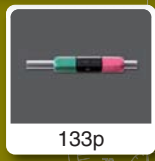
130p



131p



132p



133p



134p



135p



135p



136p



137p



138p



138p



139p



140p



140p



141p



141p



142p



142p



142p



142p



143p



144p



144p



145p



146p



147p



147p



148p



149p



149p



150p



150p



151p



151p



152p



152p



153p



154p



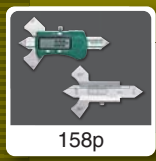
155p



156p



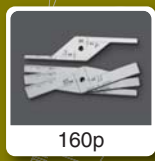
157p



158p



159p



160p



160p



161p



161p



163p



164p



164p



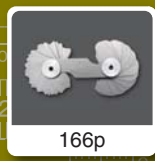
165p



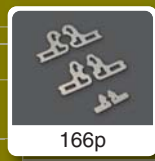
165p



165p



166p



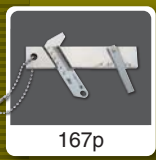
166p



167p



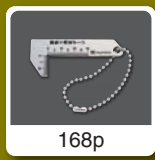
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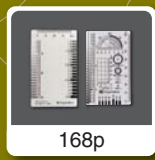
167p



167p



168p



168p



168p

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIESTHREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES



BLOCK GAUGE SET



GBS1-32

SPECIFICATIONS

Size (mm)		Grade 1	
Over	Below	Tolerance (μm)	Dimensional deviation (μm)
—	10	± 0.20	0.16
10	25	± 0.30	0.16
25	50	± 0.40	0.18
50	75	± 0.50	0.18
75	100	± 0.60	0.20

- USE**
- For general measurement and reference standard in workshop

- MATERIAL**
- High carbon high chromium steel

- FEATURES**
- Conforms to JIS (Grade 1) Standard

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

Order No.	Model No.	Pieces per set	Step (mm)	Nominal Size (mm)	Number of pieces	Weight
150801	GBS1-103	103		1.005	1	3.48kg
			0.01	1.01·1.02··1.49	49	
			0.5	0.5·1.0··24.5	49	
			25	25·50·75·100	4	
150802	GBS1-76	76		1.005	1	2.1kg
			0.01	1.01·1.02··1.49	49	
			0.5	0.5·1.0··9.5	19	
			10	10·20·30·40	4	
150804	GBS1-47	47		1.005	1	2.1kg
			0.01	1.01·1.02··1.09	9	
			0.1	1.1·1.2··1.9	9	
			1.0	1·2·3··24	24	
150806	GBS1-32	32		1.005	1	1kg
			0.01	1.01·1.02··1.09	9	
			0.1	1.1·1.2··1.9	9	
			1	1·2·3··9	9	
			10	10·20·30	3	
			60		1	



USE • For general measurement and reference standard in workshop

MATERIAL
• High carbon high chromium steel

FEATURES
• Conforms to JIS (Grade 1) standard

SPECIFICATIONS

Size (mm)		Grade1	
Over	Below	Tolerance (μm)	Dimensional Deviation (μm)
—	10	± 0.20	0.16
10	25	± 0.30	0.16
25	50	± 0.40	0.18
50	75	± 0.50	0.18
75	100	± 0.60	0.20
100	150	± 0.80	0.20
150	200	± 1.00	0.25
200	250	± 1.20	0.25
250	300	± 1.40	0.25
300	400	± 1.80	0.30
400	500	± 2.20	0.35
500	600	± 2.60	0.40

Order No.	Model No.	Size
150810	GB1-05	0.5mm
150820	GB1-10	1.0mm
150822	GB1-1-001	1.001mm
150823	GB1-1-002	1.002mm
150824	GB1-1-003	1.003mm
150825	GB1-1-004	1.004mm
150826	GB1-1-005	1.005mm
150827	GB1-1-006	1.006mm
150828	GB1-1-007	1.007mm
150829	GB1-1-008	1.008mm
150830	GB1-1-009	1.009mm
150831	GB1-101	1.01mm
150832	GB1-102	1.02mm
150833	GB1-103	1.03mm
150834	GB1-104	1.04mm
150835	GB1-105	1.05mm
150836	GB1-106	1.06mm
150837	GB1-107	1.07mm
150838	GB1-108	1.08mm
150839	GB1-109	1.09mm
150840	GB1-110	1.10mm
150841	GB1-111	1.11mm
150842	GB1-112	1.12mm
150843	GB1-113	1.13mm
150844	GB1-114	1.14mm
150845	GB1-115	1.15mm
150846	GB1-116	1.16mm
150847	GB1-117	1.17mm
150848	GB1-118	1.18mm
150849	GB1-119	1.19mm
150850	GB1-120	1.20mm
150851	GB1-121	1.21mm
150852	GB1-122	1.22mm
150853	GB1-123	1.23mm
150854	GB1-124	1.24mm
150855	GB1-125	1.25mm
150856	GB1-126	1.26mm
150857	GB1-127	1.27mm
150858	GB1-128	1.28mm
150859	GB1-129	1.29mm
150860	GB1-130	1.30mm
150861	GB1-131	1.31mm

Order No.	Model No.	Size
150862	GB1-132	1.32mm
150863	GB1-133	1.33mm
150864	GB1-134	1.34mm
150865	GB1-135	1.35mm
150866	GB1-136	1.36mm
150867	GB1-137	1.37mm
150868	GB1-138	1.38mm
150869	GB1-139	1.39mm
150870	GB1-140	1.40mm
150871	GB1-141	1.41mm
150872	GB1-142	1.42mm
150873	GB1-143	1.43mm
150874	GB1-144	1.44mm
150875	GB1-145	1.45mm
150876	GB1-146	1.46mm
150877	GB1-147	1.47mm
150878	GB1-148	1.48mm
150879	GB1-149	1.49mm
150880	GB1-150	1.50mm
150885	GB1-200	2.00mm
150886	GB1-250	2.50mm
150887	GB1-300	3.00mm
150888	GB1-350	3.50mm
150889	GB1-400	4.00mm
150890	GB1-450	4.50mm
150891	GB1-500	5.00mm
150893	GB1-550	5.50mm
150894	GB1-600	6.00mm
150895	GB1-650	6.50mm
150896	GB1-700	7.00mm
150897	GB1-750	7.50mm
150899	GB1-800	8.00mm
150900	GB1-850	8.50mm
150901	GB1-900	9.00mm
150902	GB1-950	9.50mm
150903	GB1-1000	10.00mm
150905	GB1-1050	10.50mm
150906	GB1-1100	11.00mm
150907	GB1-1150	11.50mm
150908	GB1-1200	12.00mm
150909	GB1-1250	12.50mm
150911	GB1-1300	13.00mm

Order No.	Model No.	Size
150912	GB1-1350	13.50mm
150913	GB1-1400	14.00mm
150914	GB1-1450	14.50mm
150915	GB1-1500	15.00mm
150916	GB1-1550	15.50mm
150917	GB1-1660	16.00mm
150918	GB1-1650	16.50mm
150919	GB1-1700	17.00mm
150920	GB1-1750	17.50mm
150921	GB1-1800	18.00mm
150922	GB1-1850	18.50mm
150923	GB1-1900	19.00mm
150924	GB1-1950	19.50mm
150925	GB1-2000	20.00mm
150927	GB1-2050	20.50mm
150928	GB1-2100	21.00mm
150929	GB1-2150	21.50mm
150930	GB1-2200	22.00mm
150931	GB1-2250	22.50mm
150933	GB1-2300	23.00mm
150934	GB1-2350	23.50mm
150935	GB1-2400	24.00mm
150936	GB1-2450	24.50mm
150937	GB1-2500	25.00mm
150939	GB1-3000	30.00mm
150940	GB1-4000	40.00mm
150941	GB1-5000	50.00mm
150942	GB1-6000	60.00mm
150944	GB1-7000	70.00mm
150945	GB1-7500	75.00mm
150946	GB1-8000	80.00mm
150947	GB1-9000	90.00mm
150948	GB1-10000	100.00mm
150949	GB1-12500	125mm
150950	GB1-15000	150mm
150794	GB1-17500	175mm
150795	GB1-20000	200mm
150796	GB1-25000	250mm
150797	GB1-30000	300mm
150798	GB1-40000	400mm
150799	GB1-50000	500mm
150800	GB1-60000	600mm

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES



CERAMIC BLOCK GAUGE SET



BC-032

SPECIFICATIONS

Size (mm)		Grade0	
Over	Below	Tolerance (μm)	Dimensional Deviation (μm)
—	10	± 0.12	0.10
10	25	± 0.14	0.10
25	50	± 0.20	0.10
50	75	± 0.25	0.12
75	100	± 0.30	0.12

USE • For general measurement and reference standard in workshop

MATERIAL

- Ceramic (Zircon)

FEATURES

- Abrasion resistant
- Free from rust and corrosion, and easy maintenance
- Ceramic material is less susceptible to abrasion and age deterioration than steel
- Non-magnetic
- Conforms to JIS (Grade 0) Standard

Comparison between steel and ceramic materials

Item	Materials		Ceramic	Steel
	Hardness	HV		
Hardness			1300	800
Coefficient of thermal expansion		$10^{-6}/\text{K}$	9.5	11.5
Specific Gravity			6	7.8
Heat conductivity		$\text{W}/\text{m}\cdot\text{K}$	2.5	76

SET Item

Order No.	Model No.	Pieces per set	Step (mm)	Nominal Size (mm)	Number of piece	Weight
150770	BC-032	32	—	1.005	1	950g
			0.01	1.01·1.02··1.09	9	
			0.1	1.1·1.2··1.9	9	
			1	1·2·3··9	9	
			10	10·20·30	3	
150771	BC-047	47	—	50	1	2.25kg
			—	1.005	1	
			0.01	1.01·1.02··1.09	9	
			0.1	1.1·1.2··1.9	9	
			1	1·2·3··24	24	
			25	25·50·75·100	4	

SINGLE Item

Order No.	Model No.	Size (mm)
150720	BC0-10	1
150721	BC0-1-005	1.005
150722	BC0-101	1.01
150723	BC0-102	1.02
150724	BC0-103	1.03
150725	BC0-104	1.04
150726	BC0-105	1.05
150727	BC0-106	1.06
150728	BC0-107	1.07
150729	BC0-108	1.08
150730	BC0-109	1.09
150731	BC0-110	1.1
150732	BC0-120	1.2
150733	BC0-130	1.3
150734	BC0-140	1.4
150735	BC0-150	1.5
150736	BC0-160	1.6
150737	BC0-170	1.7
150738	BC0-180	1.8
150739	BC0-190	1.9
150740	BC0-200	2
150741	BC0-300	3
150742	BC0-400	4
150743	BC0-500	5
150744	BC0-600	6

Order No.	Model No.	Size (mm)
150745	BC0-700	7
150746	BC0-800	8
150747	BC0-900	9
150748	BC0-1000	10
150749	BC0-1100	11
150750	BC0-1200	12
150751	BC0-1300	13
150752	BC0-1400	14
150753	BC0-1500	15
150754	BC0-1600	16
150755	BC0-1700	17
150756	BC0-1800	18
150757	BC0-1900	19
150758	BC0-2000	20
150759	BC0-2100	21
150760	BC0-2200	22
150761	BC0-2300	23
150762	BC0-2400	24
150763	BC0-2500	25
150764	BC0-3000	30
150765	BC0-5000	50
150766	BC0-6000	60
150767	BC0-7500	75
150768	BC0-10000	100

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES

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 (μm)	Out of Roundness/ Cylindricity (μm)	Hardness (HV)
0.05 ... 0.09	0.01 Step	5~10	±0.5	0.5	More than 650
0.10 ... 0.19		40	±0.8		
0.200... 0.999	0.001 Step			50	
1.000...10.000		0.01 Step	50		
10.01 ...20.00	—			50	
20.01 ...30.00		—	50		
30.01 ...41.00	—			50	±3

※ 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 VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



STEEL PIN GAUGE SET SA series

JCSS Calibration
available

T RACEABILITY

STEEL PIN GAUGES SET

High precision quality pin gauge

SUB-ZERO TREATMENT (Cryogenic hardened)



SPECIFICATIONS

Nominal Size (mm)	Step (mm)	Length (mm)	Tolerance (μ m)	Out of Roundness (μ m)	Out of Cylindricity (μ m)	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			±0.5	0.5	0.5	

FEATURES

- High precision quality pin gauge

(0.001mm step)

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

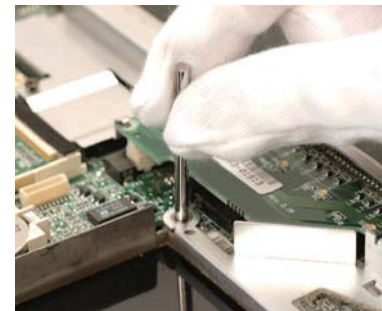
Model No.	Nominal size (mm)	Pins per set
SA-37	3.697 3.710	14
SA-38	3.797 3.810	14
SA-39	3.897 3.910	14
SA-40	3.997 4.010	14
SA-41	4.097 4.110	14
SA-42	4.197 4.210	14
SA-43	4.297 4.310	14
SA-44	4.397 4.410	14
SA-45	4.497 4.510	14
SA-46	4.597 4.610	14
SA-47	4.697 4.710	14
SA-48	4.797 4.810	14
SA-49	4.897 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

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES

New Product! 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)

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

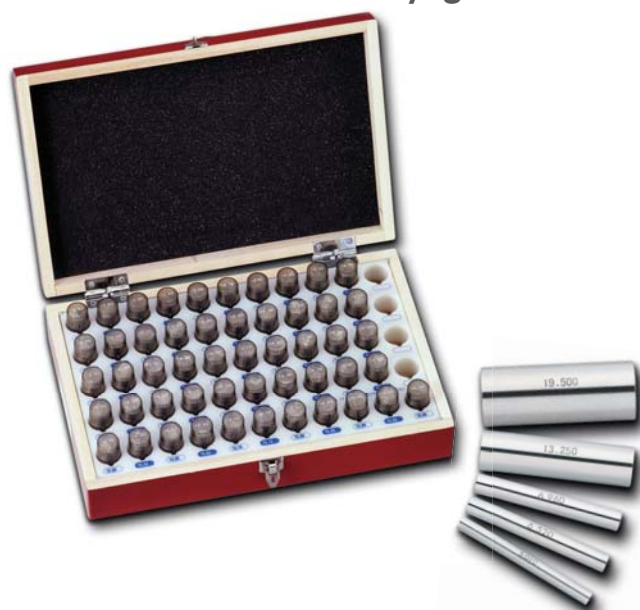


STEEL PIN GAUGE SET AH • AP • AAP • AS series

JCSS Calibration
available
(10.000mm or less)

T RACEABILITY

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 $\pm 0.05\text{mm}$ 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	
	4.950 • 4.960 5.000 5.040 • 5.050	
AS-2	5.950 • 5.960 6.000 6.040 • 6.050	55
	6.950 • 6.960 7.000 7.040 • 7.050	
	7.950 • 7.960 8.000 8.040 • 8.050	
	8.950 • 8.960 9.000 9.040 • 9.050	
	9.950 • 9.960 10.000 10.04 • 10.05	
AS-3	10.95 • 10.96 11.00 11.04 • 11.05	55
	11.95 • 11.96 12.00 12.04 • 12.05	
	12.95 • 12.96 13.00 13.04 • 13.05	
	13.95 • 13.96 14.00 14.04 • 14.05	
	14.95 • 14.96 15.00 15.04 • 15.05	
AS-4	15.95 • 15.96 16.00 16.04 • 16.05	55
	16.95 • 16.96 17.00 17.04 • 17.05	
	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-1	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	
	4.450 • 4.460 4.500 4.540 • 4.550	
ASP-2	5.450 • 5.460 5.500 5.540 • 5.550	55
	6.450 • 6.460 6.500 6.540 • 6.550	
	7.450 • 7.460 7.500 7.540 • 7.550	
	8.450 • 8.460 8.500 8.540 • 8.550	
ASP-3	9.450 • 9.460 9.500 9.540 • 9.550	55
	10.45 • 10.46 10.50 10.54 • 10.55	
	11.45 • 11.46 11.50 11.54 • 11.55	
	12.45 • 12.46 12.50 12.54 • 12.55	
ASP-4	13.45 • 13.46 13.50 13.54 • 13.55	55
	14.45 • 14.46 14.50 14.54 • 14.55	
	15.45 • 15.46 15.50 15.54 • 15.55	
	16.45 • 16.46 16.50 16.54 • 16.55	
ASP-5	17.45 • 17.46 17.50 17.54 • 17.55	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
GAUGESPIN
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GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES

SUB-ZERO TREATMENT (Cryogenic hardened)

PM series ⊕ ⊖

FEATURES

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



SPECIFICATIONS

Size (mm)	Step (mm)	Length (mm)	Tolerance (μm)	Out of Roundness/ Cylindricity (μm)	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	

PG series ⊕ ⊖

FEATURES

- Pin Gauges with tolerance of +2 to +5μm (or -2 to -5μm) 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

Nominal size (mm)	Step (mm)	Length (mm)	Tolerance (μm)	Out of Roundness/ Cylindricity (μm)	Hardness (HV)
0.100 ... 0.190	0.01 step	20	⊕2~5 based on nominal size	1.5	Over 650
0.200 ... 0.290		40	⊖2~5 based on nominal size		
0.300 ... 0.975	0.025 step	50	※		
1.000 ...12.975					
13.000 ...19.000	0.1 step				

※The tolerance of 13.000~19.000 Pin Gauges is with Plus (or Minus) 1~5μm

Model No.	Nominal size	Step	Pins per set
PG-00	0.100• 0.110• 0.120 ... 0.290	0.01 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		110
PG-2C	12.550•12.575•12.600 ...12.975		18
PG-3	13.000•13.100•13.200 ...19.000	0.1 step	61

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



STEEL PIN GAUGE with CENTER HOLE AC series



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

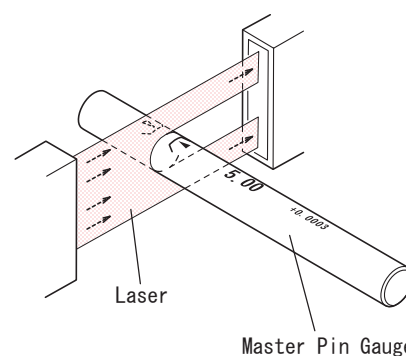
Nominal size (mm)	Step (mm)	Length (mm)	Tolerance (μm)	Out of Roundness (μm)	Out of Cylindricity (μm)	Runout Tolerance (μm)	Center hole Angle	Center hole Diameter (mm)	Hardness (HV)
2.00... 2.99	0.01 step	50	± 2.0	1.0	1.0	Within 2.0	60°	1.3	More than 650
3.00... 3.99								1.8	
4.00... 6.99								2.4	
7.00...10.00								4.0	

MASTER PIN GAUGE



SUB-ZERO TREATMENT (Cryogenic hardened)

Example use



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

FEATURES

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

SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)	Uncertainty (μm)	Out of Roundness (μm)	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)



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

SPECIFICATIONS

Nominal size (mm)	Step (mm)	Length (mm)		Tolerance (μm)	Out of Roundness (μm)	Out of Cylindricity (μm)	Hardness (HV)
		Gauge Length	Overall Length				
0.07… 0.09	0.01 step	3	41	± 0.5	0.5	0.5	More than 650
0.10… 0.19							
0.20… 0.29							
0.30… 0.49		10	48	± 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

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

STEEL PIN GAUGE for GEAR MEASUREMENT OP series

JCSS Calibration available

T RACEABILITY

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 ₁) (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 ₁) (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

LAPPED FINISH (except for custom made item)

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 (μm)	Out of Roundness/ Cylindricity (μm)
0.50... 0.99	0.01 step	30	± 1	0.8
1.00... 2.99		38		
3.00... 10.00		50		
10.01... 14.00			± 1.5	1.3

(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

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	25	63	± 1	0.8
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
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

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



CERAMIC PIN GAUGE SET CAA • CAG series

LAPPED FINISH (except for custom made item)

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 ⁻⁶ K ⁻¹	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	—	50	±1	0.8
10.00				

※ 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.

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

PIN GAUGE ACCESSORIES

PLASTIC CASE



Removable lid for use as tray

Stands

Stacks

PCS-1
■ AA series AA-00 ~ AA-6B
■ TAA series TAA-0B ~ TAA-6B
■ CAA series CAA-0B ~ CAA-6B

PCS-2
■ AA series AA-7A ~ AA-15B
■ TAA series AA-7A ~ TAA-9B
■ CAA series CAA-7A ~ CAA-9B

WOODEN CASE



W-1
■ STEEL PIN GAUGE SET PG-00⊕⊖ PG-0⊕⊖

W-2
■ STEEL PIN GAUGE SET PG-2C⊕⊖

W-3
W-3A ■ STEEL PIN GAUGE SET PG-1⊕⊖ PG-2A⊕⊖ PG-2B⊕⊖
W-3B ■ STEEL PIN GAUGE SET PG-3⊕⊖

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

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

PIN GAUGE CABINET P-5C

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

All drawers can be locked at once

Lock

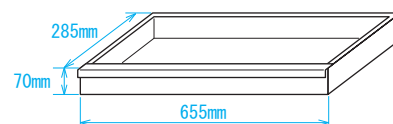
Applicable case : PCS-1, PCS-2



Handle can be mounted either right side or left side

Handle

[Drawer dimensions (removed)]



※ Pin gauges are not included

Caster

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

MAINTENANCE KIT



PLASTIC CASE for individual pin gauge



For Steel Pin Gauge			
22.00 ~ 30.00	16.00 ~ 22.00	7.000 ~ 16.00	0.060 ~ 7.000



For Carbide Pin Gauge		For Ceramic Pin Gauge		For Maintenance Line Pin Gauge	
7.00 ~ 10.00	0.50 ~ 7.00	7.00 ~ 10.00	0.50 ~ 7.00	7.00 ~ 10.00	3.00 ~ 7.00

■ USE • For pin gauge maintenance

■ FEATURES • Plastic case for easy to carry

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



ALUMINUM PIN VISE

USE • For holding pin gauge

FEATURES

- Body : Aluminum
- With special made resin collet, Aluminum Pin Vise is strong for deformation, but soft for Pin Gauge
- Aluminum Pin Vise can be used as Limit Plug Gauge, holding Pin Gauges in both GO (green) and NO GO (red) side.
- Size is marked on the handle.
- With Plastic Case

SPECIFICATIONS

- Holding range : 0.5mm



APV-17A

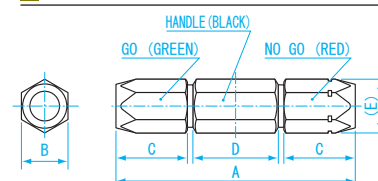


APV-6A

Example use



DIMENSIONS



Units : mm

Size	A	B	C	D	E
APV-0A ~ 6B	91	14	23	40	16
APV-7A ~ 9B	90	17	26	34	19.5
APV-10A ~ 12B	105	21	31	39	24
APV-13A ~ 15B	111	24	31	45	27.5
APV-16A ~ 19B	117	28	32	48	32

Order No.	Model No.	Pin Gauge size	Weight
216001	APV-0A	0.200~ 0.500	30g
216002	APV-0B	0.500~ 1.000	30g
216011	APV-1A	1.000~ 1.500	30g
216012	APV-1B	1.500~ 2.000	30g
216021	APV-2A	2.000~ 2.500	30g
216022	APV-2B	2.500~ 3.000	30g
216031	APV-3A	3.000~ 3.500	30g
216032	APV-3B	3.500~ 4.000	30g
216041	APV-4A	4.000~ 4.500	30g
216042	APV-4B	4.500~ 5.000	30g
216051	APV-5A	5.000~ 5.500	30g
216052	APV-5B	5.500~ 6.000	30g
216061	APV-6A	6.000~ 6.500	30g
216062	APV-6B	6.500~ 7.000	30g
216071	APV-7A	7.000~ 7.500	40g
216072	APV-7B	7.500~ 8.000	40g
216081	APV-8A	8.000~ 8.500	40g
216082	APV-8B	8.500~ 9.000	40g
216091	APV-9A	9.000~ 9.500	40g
216092	APV-9B	9.500~10.000	40g
216101	APV-10A	10.000~10.50	65g
216102	APV-10B	10.50 ~11.00	65g
216111	APV-11A	11.00 ~11.50	65g
216112	APV-11B	11.50 ~12.00	65g
216121	APV-12A	12.00 ~12.50	65g
216122	APV-12B	12.50 ~13.00	65g
216131	APV-13A	13.00 ~13.50	80g
216132	APV-13B	13.50 ~14.00	80g
216141	APV-14A	14.00 ~14.50	80g
216142	APV-14B	14.50 ~15.00	80g
216151	APV-15A	15.00 ~15.50	80g
216152	APV-15B	15.50 ~16.00	80g
216161	APV-16A	16.00 ~16.50	110g
216162	APV-16B	16.50 ~17.00	110g
216171	APV-17A	17.00 ~17.50	110g
216172	APV-17B	17.50 ~18.00	110g
216181	APV-18A	18.00 ~18.50	110g
216182	APV-18B	18.50 ~19.00	110g
216191	APV-19A	19.00 ~19.50	110g
216192	APV-19B	19.50 ~20.00	110g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



USE

- For holding Pin Gauges

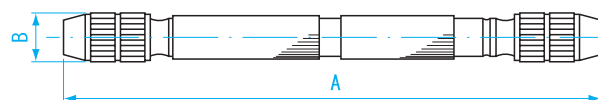
FEATURES

- Chrome plated brass
- Pin Vise can be used as Limit Plug Gauge by holding Pin Gauges in both GO (no line) and NO GO (red line) side

SPECIFICATIONS

- Holding range: 0.5mm

DIMENSIONS



Units : mm

Pin Vise No.	A	B
PV-0A ~ 2B	98	9
PV-3A ~ 4B	104	11
PV-5A ~ 6B	114	14
PV-7A ~ 9B	135	17

BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

Order No.	Model No.	Pin Gauge Size	Part No.			Weight
			Ring	Grip	Collet	
219001	PV-0A	0.200 ~ 0.500	B1	B2	B00	30g
219002	PV-0B	0.500 ~ 1.000	B1	B2	B01	30g
219011	PV-1A	1.000 ~ 1.500	B1	B2	B3	30g
219012	PV-1B	1.500 ~ 2.000	B1	B2	B4	30g
219021	PV-2A	2.000 ~ 2.500	B1	B2	B5	30g
219022	PV-2B	2.500 ~ 3.000	B1	B2	B6	30g
219031	PV-3A	3.000 ~ 3.500	B7	B8	B9	40g
219032	PV-3B	3.500 ~ 4.000	B7	B8	B10	40g
219041	PV-4A	4.000 ~ 4.500	B7	B8	B11	40g
219042	PV-4B	4.500 ~ 5.000	B7	B8	B12	40g
219051	PV-5A	5.000 ~ 5.500	B13	B14	B15	70g
219052	PV-5B	5.500 ~ 6.000	B13	B14	B16	80g
219061	PV-6A	6.000 ~ 6.500	B13	B14	B17	80g
219062	PV-6B	6.500 ~ 7.000	B13	B14	B18	80g
219071	PV-7A	7.000 ~ 7.500	B19	B20	B21	110g
219072	PV-7B	7.500 ~ 8.000	B19	B20	B22	110g
219081	PV-8A	8.000 ~ 8.500	B19	B20	B23	110g
219082	PV-8B	8.500 ~ 9.000	B19	B20	B24	110g
219091	PV-9A	9.000 ~ 9.500	B19	B20	B25	110g
219092	PV-9B	9.500 ~ 10.000	B19	B20	B26	110g

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

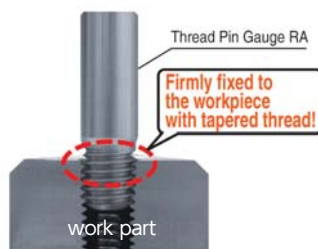
TAPER
GAUGES

WELDING
GAUGES

OTHER
GAUGES

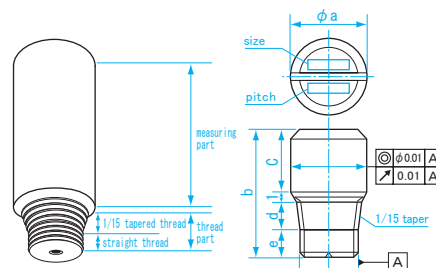
THREAD PIN GAUGE RA

Suitable when screw holes on workpiece is not chamfered



DIMENSIONS

Units : mm



FEATURES

- Threaded portion has 1/15 taper starting at half way point to secure gauge to workpiece.
- Gauge will hold secure to workpiece for holes that are not chamfered to allow measurement of hole angle, etc. which can not be measured with traditional pin gauges.
- Also suitable for deburring Process

Accuracy	Runout between measurement part and thread part : Model No. RA○○-1...within 0.01mm Runout between measurement part and thread part : Model No. RA○○-2...within 0.015mm Runout between measurement part and thread part : Model No. RA○○-3...within 0.02mm Accuracy of ϕa : within ± 0.005 mm
MATERIAL	Stainless Steel (SUS303)

<Size List>

Order No.	Model No.	Size	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)
250011	RA125-1	M1 × P0.25	2	8.0	4.5	1.50	1.00
250012	RA125-2	M1 × P0.25		13.5	10.0		
250013	RA125-3	M1 × P0.25		23.5	20.0		
250014	RA204-1	M2 × P0.4	3	10.0	4.5	2.50	2.00
250015	RA204-2	M2 × P0.4		25.5	20.0		
250016	RA204-3	M2 × P0.4		35.5	30.0		
250017	RA305-1	M3 × P0.5	4	12.0	5.0	3.50	2.50
250018	RA305-2	M3 × P0.5		27.0	20.0		
250019	RA305-3	M3 × P0.5		37.0	30.0		
250020	RA407-1	M4 × P0.7	5	14.0	6.0	3.50	3.50
250021	RA407-2	M4 × P0.7		28.0	20.0		
250022	RA407-3	M4 × P0.7		38.0	30.0		
250023	RA508-1	M5 × P0.8	6	16.0	7.0	4.00	4.00
250024	RA508-2	M5 × P0.8		29.0	20.0		
250025	RA508-3	M5 × P0.8		39.0	30.0		
250026	RA610-1	M6 × P1.0	7	18.0	8.0	4.00	5.00
250027	RA610-2	M6 × P1.0		30.0	20.0		
250028	RA610-3	M6 × P1.0		40.0	30.0		
250029	RA8125-1	M8 × P1.25	9	19.0	8.5	4.50	5.00
250030	RA8125-2	M8 × P1.25		30.5	20.0		
250031	RA8125-3	M8 × P1.25		40.5	30.0		
250032	RA1015-1	M10 × P1.5	11	21.0	8.5	5.50	6.00
250033	RA1015-2	M10 × P1.5		32.5	20.0		
250034	RA1015-3	M10 × P1.5		42.5	30.0		
250035	RA1215-1	M12 × P1.5	13	23.0	8.5	6.50	7.00
250036	RA1215-2	M12 × P1.5		34.5	20.0		
250037	RA1215-3	M12 × P1.5		44.5	30.0		
250038	RA12175-1	M12 × P1.75	15	23.0	8.5	6.50	7.00
250039	RA12175-2	M12 × P1.75		34.5	20.0		
250040	RA12175-3	M12 × P1.75		44.5	30.0		
250041	RA1415-1	M14 × P1.5	17	23.5	8.5	6.50	7.50
250042	RA1415-2	M14 × P1.5		35.0	20.0		
250043	RA1415-3	M14 × P1.5		45.0	30.0		
250044	RA1615-1	M16 × P1.5	19	23.5	8.5	7.00	8.00
250045	RA1615-2	M16 × P1.5		35.0	20.0		
250046	RA1615-3	M16 × P1.5		45.0	30.0		
250047	RA1815-1	M18 × P1.5	19	24.5	8.5	7.00	8.00
250048	RA1815-2	M18 × P1.5		36.0	20.0		
250049	RA1815-3	M18 × P1.5		46.0	30.0		

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

THREAD PIN GAUGE

FEATURES

- Easy handling with simple tool
- Possible to measure easily, economically, accurately compared to other Gauges
- With support of threaded portion, accurate measurement is possible

Accuracy	Runout between Measuring Head and Screw: Below 0.01mm Accuracy of Measuring Head (size: a): Below $\pm 0.005\text{mm}$ Screw: equivalent for JIS for the second grade
Material	Stainless steel (SUS303)

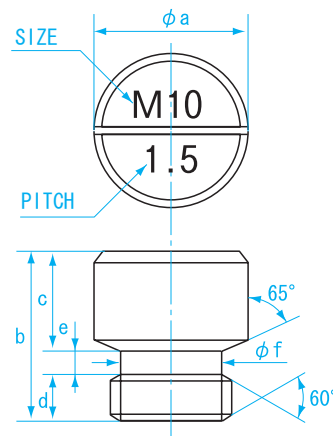


(Size List)

Order No.	Model No.	Size	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)
360204	THP-0204	M 2 × P0.4	4	9.5	6	3	0.5	1.4
360305	THP-0305	M 3 × P0.5	5					2.2
360407	THP-0407	M 4 × P0.7	6	11		4.3	0.7	3
360508	THP-0508	M 5 × P0.8	7		4	1	3.9	
360607	THP-06075	M 6 × P0.75	8	14	8		5	4.5
360610	THP-0610	M 6 × P1.0						
360810	THP-0810	M 8 × P1.0	10	17	10	5.5	1.5	6
360812	THP-08125	M 8 × P1.25						
361010	THP-1010	M10 × P1.0	12	18		6.5		7.5
361012	THP-10125	M10 × P1.25						
361015	THP-1015	M10 × P1.5	14	19	7.5	8.5	9.5	
361210	THP-1210	M12 × P1.0						
361212	THP-12125	M12 × P1.25						
361215	THP-1215	M12 × P1.5	16	20	8.5	9.5		
361217	THP-12175	M12 × P1.75						
361415	THP-1415	M14 × P1.5						
361420	THP-1420	M14 × P2.0	18	20	8.5	9.5		
361615	THP-1615	M16 × P1.5						
361620	THP-1620	M16 × P2.0	20				20	8.5
361825	THP-1825	M18 × P2.5						
362025	THP-2025	M20 × P2.5	22					

※ Custom made Pin Gauge is also available

DIMENSIONS



BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

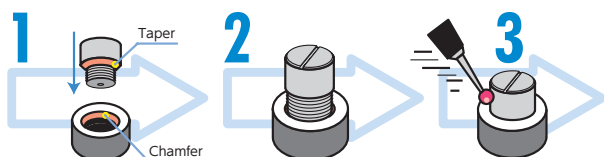
TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

How to use Thread Pin Gauge

- Easily locate threaded hole position with thread pin gauge
CMM can Easily attain the hole center using thread pin gauge



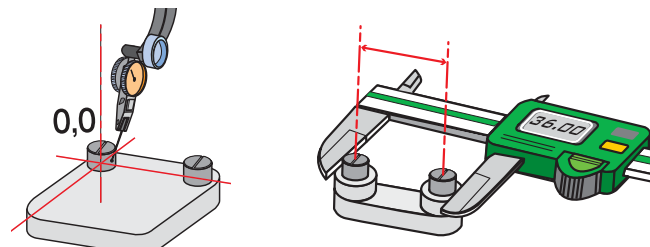
1. Prepare a thread pin gauge the same size as the threaded hole

2. Hand screw the thread pin gauge into the threaded hole

3. Measure!

Example of use

- Reference position established with two threaded holes.
- Pitch measurement between threaded holes





THREAD LIMIT GAUGE

Check accuracy of threads easily using GO/NOGO thread gauges

Category	for Inspection
Thread Plug Gauge, Class 2	GPIP
Thread Ring Gauge, Class 2	GRIR

※ Thread Gauge for Machine Work (WPWP, GRWR) are also available.
※ ISO type are available on request.

USE • For screw thread inspection

FEATURES

- Checks upper and lower limit dimensional precision

THREAD PLUG GAUGE



MATERIAL

- Gauge part : Alloy tool steel
- Handle part : Aluminum

● For each screw size to be measured the corresponding gauge has standard dimensions. The gauge is used to perform GO/NOGO test based on the prescribed minimum and maximum dimensions for each screw grade.

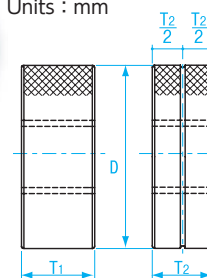
To use test thread using gauge, GO gauge should thread without any difficulties and NOGO gauge should not thread more than two complete revolutions.

THREAD RING GAUGE



DIMENSIONS

Units : mm



MATERIAL

- Alloy tool steel

Size	Size
M1.4×P0.3	M8 ×P1.25
M1.6×P0.35	M10 ×P1.0
M1.7×P0.35	M10 ×P1.25
M2 ×P0.4	M10 ×P1.5
M2.3×P0.4	M12 ×P1.0
M2.5×P0.45	M12 ×P1.25
M2.6×P0.45	M12 ×P1.5
M3 ×P0.5	M12 ×P1.75
M3.5×P0.6	M14 ×P1.5
M4 ×P0.5	M14 ×P2.0
M4 ×P0.7	M16 ×P1.5
M5 ×P0.8	M16 ×P2.0
M6 ×P0.75	M18 ×P1.5
M6 ×P1.0	M18 ×P2.5
M7 ×P1.0	M20 ×P1.5
M8 ×P1.0	M20 ×P2.5

Order No.	Model No.	Size	Outside Dimension / D (mm)	T ₁ (mm)	T ₂ (mm)
380204	GRIR2-0204	M2×P0.4	25	3	3
380205	GRIR2-02304	M2.3×P0.4			
380206	GRIR2-025045	M2.5×P0.45		4	4
380207	GRIR2-026045	M2.6×P0.45			
380305	GRIR2-0305	M3 ×P0.5	30	6	6
380407	GRIR2-0407	M4 ×P0.7			
380508	GRIR2-0508	M5 ×P0.8		8	8
380610	GRIR2-0610	M6 ×P1.0			
380710	GRIR2-0710	M7 ×P1.0	40	10	10
380810	GRIR2-0810	M8 ×P1.0			
380812	GRIR2-08125	M8 ×P1.25		15	15
381010	GRIR2-1010	M10 ×P1.0			
381012	GRIR2-10125	M10 ×P1.25	50	22	22
381015	GRIR2-1015	M10 ×P1.5			
381210	GRIR2-1210	M12 ×P1.0		22	22
381212	GRIR2-12125	M12 ×P1.25			
381215	GRIR2-1215	M12 ×P1.5	50	22	22
381217	GRIR2-12175	M12 ×P1.75			
381415	GRIR2-1415	M14 ×P1.5		22	22
381420	GRIR2-1420	M14 ×P2.0			
381615	GRIR2-1615	M16 ×P1.5	50	22	22
381620	GRIR2-1620	M16 ×P2.0			
381815	GRIR2-1815	M18 ×P1.5		22	22
381825	GRIR2-1825	M18 ×P2.5			
382015	GRIR2-2015	M20 ×P1.5	50	22	22
382025	GRIR2-2025	M20 ×P2.5			

Other size above the list also available on request

BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

TAPER
GAUGES

WELDING
GAUGES

OTHER
GAUGES

STEEL LIMIT PLUG GAUGE H7 (for manufacturing)

Pair of gauges with maximum and minimum limit size to test the compatibility of holes and widths

USE • For inspecting hole diameter

MATERIAL • Body : Aluminum • Gauge : Steel



Order No.	Model No.	Standard	Tolerance class	Tolerance (μm)
393030	SPG3-H7	φ 3	H7	+10 0
393040	SPG4-H7	φ 4		+12 0
393050	SPG5-H7	φ 5		
393060	SPG6-H7	φ 6		+15 0
393070	SPG7-H7	φ 7		
393080	SPG8-H7	φ 8		
393090	SPG9-H7	φ 9		
393100	SPG10-H7	φ10		+18 0
393110	SPG11-H7	φ11		
393120	SPG12-H7	φ12		
393130	SPG13-H7	φ13		
393140	SPG14-H7	φ14		
393150	SPG15-H7	φ15		
393160	SPG16-H7	φ16		
393170	SPG17-H7	φ17		
393180	SPG18-H7	φ18		+21 0
393190	SPG19-H7	φ19		
393200	SPG20-H7	φ20		

CARBIDE LIMIT PLUG GAUGE H7 (for manufacturing)

Excellent in abrasion resistance, made of durable carbide

USE • For inspecting hole diameter

MATERIAL • Body : Aluminum • Gauge : Carbide



Order No.	Model No.	Standard	Tolerance class	Tolerance (μm)
393230	TPG3-H7	φ 3	H7	+10 0
393240	TPG4-H7	φ 4		+12 0
393250	TPG5-H7	φ 5		
393260	TPG6-H7	φ 6		+15 0
393270	TPG7-H7	φ 7		
393280	TPG8-H7	φ 8		
393290	TPG9-H7	φ 9		
393300	TPG10-H7	φ10		+18 0
393310	TPG11-H7	φ11		
393320	TPG12-H7	φ12		
393330	TPG13-H7	φ13		
393340	TPG14-H7	φ14		
393350	TPG15-H7	φ15		
393360	TPG16-H7	φ16		
393370	TPG17-H7	φ17		
393380	TPG18-H7	φ18		+21 0
393390	TPG19-H7	φ19		
393400	TPG20-H7	φ20		

CERAMIC LIMIT PLUG GAUGE H7 (for manufacturing)

Excellent stability over time, Ceramic requires low maintenance

USE • For inspecting hole diameter

MATERIAL • Body : Aluminum • Gauge : Ceramic



Order No.	Model No.	Standard	Tolerance Class	Tolerance (μm)
393430	CPG3-H7	φ 3	H7	+10 0
393440	CPG4-H7	φ 4		+12 0
393450	CPG5-H7	φ 5		
393460	CPG6-H7	φ 6		+15 0
393470	CPG7-H7	φ 7		
393480	CPG8-H7	φ 8		
393490	CPG9-H7	φ 9		
393500	CPG10-H7	φ10		

BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

TAPER
GAUGES

WELDING
GAUGES

OTHER
GAUGES



LIMIT PLUG GAUGE H7 (for manufacturing)



LP10-H7



06

- USE**
 - Limit Plug Gauges are used for measurement tests of holes and shafts
- MATERIAL**
 - Gauge part : Alloy tool steel
 - Handle part : Aluminum
- FEATURES**
 - To determine the fit of a shaft in a hole the gauge has Go/ No. Go sides for testing minimum allowable dimensions
 - Class H7 • Hardness HV660 ~ 780

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES

Order No.	Model No.	Size	Weight
390300	LP3-H7	φ 3	10g
390400	LP4-H7	φ 4	10g
390500	LP5-H7	φ 5	10g
390600	LP6-H7	φ 6	10g
390700	LP7-H7	φ 7	20g
390800	LP8-H7	φ 8	20g
390900	LP9-H7	φ 9	20g
391000	LP10-H7	φ10	30g
391100	LP11-H7	φ11	50g
391200	LP12-H7	φ12	50g
391300	LP13-H7	φ13	60g
391400	LP14-H7	φ14	60g
391500	LP15-H7	φ15	100g
391600	LP16-H7	φ16	100g
391700	LP17-H7	φ17	120g
391800	LP18-H7	φ18	130g
391900	LP19-H7	φ19	180g
392000	LP20-H7	φ20	190g
392100	LP21-H7	φ21	200g
392200	LP22-H7	φ22	200g
392300	LP23-H7	φ23	210g
392400	LP24-H7	φ24	210g
392500	LP25-H7	φ25	250g
392600	LP26-H7	φ26	260g
392700	LP27-H7	φ27	280g
392800	LP28-H7	φ28	290g
392900	LP29-H7	φ29	290g
393000	LP30-H7	φ30	300g

Other size above the list also available on request

LIMIT PLUG GAUGE with thin handle H7 (for manufacturing)



GAUGES

Narrow shaft allows examining diameter deep into a hole



SHLP10-H7



- USE** • For inspecting hole diameter
- MATERIAL** • Gauge part : Alloy tool steel
• Handle part : Stainless
- FEATURES** • The shaft does not interfere and enables inspection of diameter deep into a hole

Order No.	Model No.	Standard	Weight
393503	SHLP3-H7	φ 3	4g
393504	SHLP4-H7	φ 4	8g
393505	SHLP5-H7	φ 5	10g
393506	SHLP6-H7	φ 6	20g
393507	SHLP7-H7	φ 7	24g
393508	SHLP8-H7	φ 8	27g
393509	SHLP9-H7	φ 9	32g
393510	SHLP10-H7	φ10	58g
393511	SHLP11-H7	φ11	63g
393512	SHLP12-H7	φ12	69g
393513	SHLP13-H7	φ13	69g
393514	SHLP14-H7	φ14	82g
393515	SHLP15-H7	φ15	89g
393516	SHLP16-H7	φ16	136g
393517	SHLP17-H7	φ17	146g
393518	SHLP18-H7	φ18	157g
393519	SHLP19-H7	φ19	169g
393520	SHLP20-H7	φ20	181g

Other size above the list also available on request

BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

TAPER
GAUGES

WELDING
GAUGES

OTHER
GAUGES

LIMIT PLUG GAUGE with MAINTENANCE LINE



New product! Maintenance line series plug gauge now available



Custom Size with Fast
Delivery!

Please contact us
with request

- USE** • For inspecting hole diameter
- MATERIAL** • Alloy tool steel
- FEATURES** • Maintenance line on Plug Gage allows easy checking for gauge wear-out
• When line disappears, wear is more than 1μm



STEEL RING GAUGE

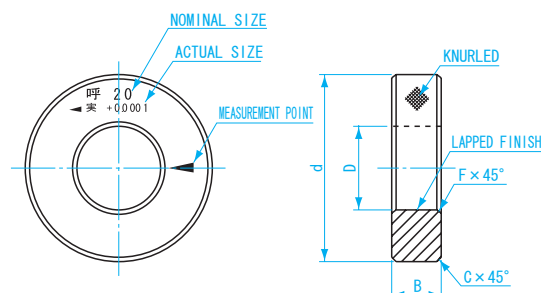
SUB-ZERO Treatment (Cryogenic hardened) for improved durability

Use Ring Gauge as master gauge for "0" adjustment of measuring tools such as bore gauge, inside micrometer, dial caliper, etc.



DIMENSIONS

Units : mm



Size List

Size D (mm)	Outside Diameter d (mm)	Thickness B (mm)	Chamfering for outside diameter C (mm)	Chamfering for inside diameter F (mm)	Remarks	Weight
1 to less than 2.5	22	4	0.4	0.3	Knurled	10g
2.5 to less than 5		5				10g
5 to less than 10	32	8	0.8	0.5		50g
10 to less than 15	38	10	1.2			80g
15 to less than 20	45	12		1.0		100g
20 to less than 25	53	14	200g			
25 to less than 32	63	16	1.5	300g		
32 to less than 40	71	18	1.5	400g		
40 to less than 50	85	20		600~700g		
50 to less than 60	100	24	2.0	1.5		0.9~1.1kg
60 to less than 70	112					1.1~1.3kg
70 to less than 80	125					1.4~1.6kg
80 to less than 90	140					1.7~1.9kg
90 to less than 100	160					2.3~2.6kg
100 to less than 110	180					30
110 to less than 120	190	35	2.4	2.0		4.7~5.1kg
120 to less than 130	200					5.0~5.5kg
130 to less than 140	210	38				5.7~6.3kg
140 to less than 160	230	40				6.6~8.2kg
160 to less than 180	260					8.6~10kg
180 to less than 200	280					9.4~11kg

MATERIAL • Alloy tool steel

SPECIFICATIONS

Size (mm)	Step (mm)	Out of Roundness (μm)	Out of Cylindricity (μm)	Tolerance (μm)	Hardness (HV)
1 to less than 30	0.1 step	0.5	0.5	± 1.0	653 772
30 to less than 50		0.8	0.8	± 1.5	
50 to less than 60	0.5 step	1.0	1.0	± 2.0	
60 to less than 80					
80 to less than 100					
100 to less than 200	5.0 step	2.0	2.0	± 5.0	

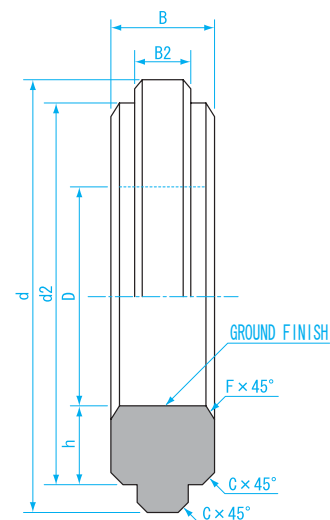
〈Stock available size〉

Size (mm)	Step (mm)	Stock available size (mm)
1 to less than 50	0.1 step	1.0•1.1•1.2•1.3•1.4•1.5•1.6•1.7•1.8•1.9•2.0•2.1•2.2•2.3•2.4•2.5•2.6•2.7.....50.0
50 to less than 100	0.5 step	50.5•51.0•51.5•52.0•52.5•53.0•53.5•54.0•54.5•55.0•55.5•56.0•56.5•57.0•57.5.....100.0
100 to less than 200	5.0 step	105.0•110.0•115.0•120.0•125.0•130.0•135.0•140.0•145.0•150.0•155.0•160.0•165.0.....200.0

SUB-ZERO TREATMENT (Cryogenic hardened) for improved durability

DIMENSIONS

Units : mm



MATERIALS • Alloy tool steel

SPECIFICATIONS

Size (mm)	Step (mm)	Out of Roundness (μ m)	Out of Cylindricity (μ m)	Tolerance (μ m)	Hardness (HV)
200 to less 230	5.0 step	5.0	5.0	$\pm$ 7.0	653 } 772
230 to less 300	10.0 step			$\pm$ 8.0	
300 to less 400				$\pm$ 9.0	
400 to less 500				$\pm$ 10.0	
500 to less 520					

Size List

※ Make- to- order manufacturing

Size D (mm)	Outside Diameter (mm)		Thickness (mm)		h (mm)	Chamfering for outside diameter C (mm)	Chamfering for inside diameter F (mm)	Remarks	Weight (kg)
	d	d2	B	B2					
200 to less than 230	310	250~270	45	25	20	2.0	2.5	NOT Knurled	9~10
230 to less than 260	340	280~300							11~14
260 to less than 290	370	310~330							11~13
290 to less than 320	400	340~360							12~14
320 to less than 360	440	380~410							14~16
360 to less than 400	480	420~450	50	25	25	2.0	2.5	NOT Knurled	15~18
400 to less than 450	540	460~500							19~24
450 to less than 500	600	510~550							23~29
500 to less than 520	660	560~600							27~33

Order No.	Size (mm)
420500	205.0
421000	210.0
421500	215.0
422000	220.0
422500	225.0
423000	230.0
424000	240.0
425000	250.0
426000	260.0
427000	270.0
428000	280.0
429000	290.0

Order No.	Size (mm)
430000	300.0
431000	310.0
432000	320.0
433000	330.0
434000	340.0
435000	350.0
436000	360.0
437000	370.0
438000	380.0
439000	390.0
440000	400.0



STEEL RING GAUGE SET



SUB-ZERO TREATMENT (Cryogenic hardened)



Set List

Set No.	Nominal Size	Pieces per set
RG-1	1.0 • 1.5 • 2.0 • 2.5 • 3.0 • 4.0 • 5.0 • 6.0 • 7.0 • 8.0 • 9.0 • 10.0	12
RG-2	11.0 • 12.0 • 13.0 • 14.0 • 15.0 • 16.0 • 17.0 • 18.0 • 19.0 • 20.0 • 22.0 • 24.0	12
RG-3	25.0 • 26.0 • 27.0 • 28.0 • 30.0 • 32.0 • 34.0 • 35.0 • 36.0 • 37.0 • 38.0 • 40.0	12
RG-4	42.0 • 44.0 • 45.0 • 46.0 • 47.0 • 48.0 • 50.0	7
RG-5	52.0 • 54.0 • 55.0 • 56.0 • 58.0 • 60.0 • 65.0	7
RG-6	68.0 • 70.0 • 75.0 • 80.0	4
RG-7	85.0 • 90.0 • 95.0 • 100.0	4

STEEL RING GAUGE with MAINTENANCE LINE



New product! Maintenance line series ring gauge now available



MATERIAL

- Alloy tool steel

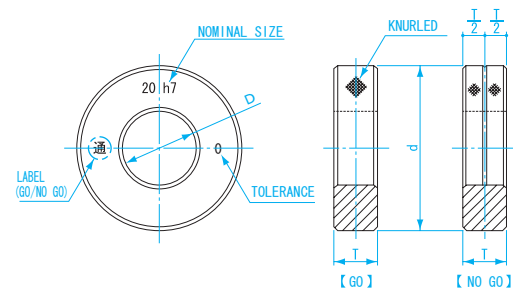
FEATURES

- Maintenance line on steel ring gauge allows easy checking for gauge wear-out.
- When line disappears, wear is more than 1μm
- Available for sizes : 15 ~ 50mm (1mm step)



DIMENSIONS

Units : mm



BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

- USE** • For shaft diameter inspection
- MATERIAL** • Alloy tool steel
- FEATURES** • Pair of gauges with maximum and minimum limit size to test the compatibility of hole width
- SPECIFICATIONS** • Hardness HV653 ~ 772

Order No.	Model No.	Nominal size D (mm)	Outside Diameter d (mm)	Thickness T (mm)	Tolerance Class	Tolerance (μm)
394000	LR10-h7	φ10	32	8	h7	0 -15
394010	LR11-h7	φ11	38	10		0 -18
394020	LR12-h7	φ12				
394030	LR13-h7	φ13				
394040	LR14-h7	φ14				
394050	LR15-h7	φ15				
394060	LR16-h7	φ16	45	12		0 -21
394070	LR17-h7	φ17				
394080	LR18-h7	φ18				
394090	LR19-h7	φ19				
394100	LR20-h7	φ20				
394110	LR21-h7	φ21	53	14		
394120	LR22-h7	φ22				
394130	LR23-h7	φ23				
394140	LR24-h7	φ24				
394150	LR25-h7	φ25				
394160	LR26-h7	φ26	63	16		
394170	LR27-h7	φ27				
394180	LR28-h7	φ28				
394190	LR29-h7	φ29				
394200	LR30-h7	φ30				

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

TAPER
GAUGES

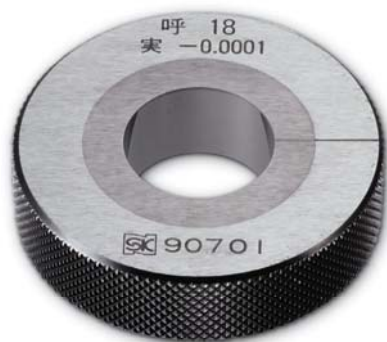
WELDING
GAUGES

OTHER
GAUGES

CARBIDE RING GAUGE



LAPPED FINISH



FEATURES

- Durable and long life
- The coefficient of thermal expansion is small ($1/2$ of steel, $5 \times 10^{-6} \text{K}^{-1}$), so better tolerates temperature changes
- Less likely to be damaged due to high hardness
- Economical- Frequent periodic calibration not required

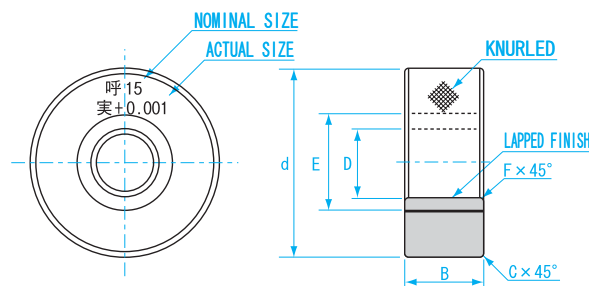
MATERIAL • Steel with carbide insert

SPECIFICATIONS

Size (mm)	Step (mm)	Out of Roundness/ Cylindricity (μm)	Tolerance (μm)
1 to less than 30	—	0.5	± 1
30 to less than 50	—	0.8	± 1.5

DIMENSIONS

Units : mm



Size List

Size D (mm)	Diameter of Carbide part E (mm)	Outside Diameter d (mm)	Thickness B (mm)	Chamfering for outside Diameter C (mm)	Chamfering for inside Diameter F (mm)
1 to less than 2.5	8	22	4	0.4	0.3
2.5 to less than 5	11		5		
5 to less than 10	16	32	8	0.8	0.5
10 to less than 15	21	38	10	1.2	
15 to less than 20	28	45	12		
20 to less than 25	33	53	14		
25 to less than 32	40	63	16	1.5	1.0
32 to less than 40	50	71	18	2.0	
40 to less than 50	60	85	20		



CERAMIC RING GAUGE

LAPPED FINISH



FEATURES

- Ceramic material is less susceptible to abrasion and age deterioration than steel
- Free from rust and corrosion, and easy maintenance
- Non-magnetic body
- Does not deform with damage, resists scratches and forming burrs
- Size is laser marked

MATERIAL • Ceramics

Material Data

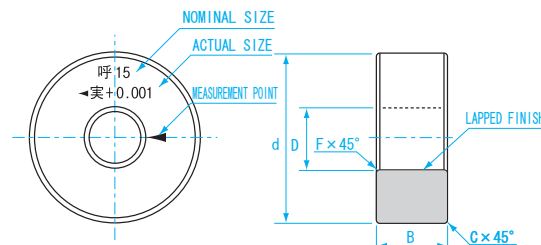
List	Material	Ceramic	
		Aluminum	Zircon
Gravity	—	3.8	5.6
Hardness	HV	1500	1100
Bending Strength	MPa	3.9	7~8
Young's modulus	GPa	360	205
Coefficient of thermal expansion	10^{-6}K^{-1}	8	8
Heat conductivity	W/m·K	29	3.4

SPECIFICATIONS

Size (mm)	Step (mm)	Out of Roundness (μm)	Tolerance (μm)
1 to less than 30	0.5 step	0.5	± 1
30 to less than 50		0.8	± 1.5

DIMENSIONS

Units : mm



Size List

Size D (mm)	Outside Diameter d (mm)	Thickness B (mm)	Chamfering for outside diameter C (mm)	Chamfering for inside diameter F (mm)
3 to less than 10	32	8	0.8	0.5
10 to less than 15	38	10	1.2	
15 to less than 20	45	12		
20 to less than 25	53	14		1.5
25 to less than 32	63	16	2.0	
32 to less than 40	71	18		
40 to less than 50	85	20		

RING GAUGE (with protective cover)



GAUGES

No-Slip and Easy to Handle, will increase productivity

CARBIDE RING GAUGE (with Protective Cover)



STEEL RING GAUGE (with Protective Cover)



CERAMIC RING GAUGE (with Protective Cover)



FEATURES

- A ring gauge embedded in Aluminum Protective Cover.
- Covered gauge is easier to handle with dirty hands Less susceptible to thermal expansion when holding a gauge by hand.
- Protects from chipping when dropped

MATERIAL

- Protective Cover: Anodized Aluminum
- Gauge: Steel / Carbide / Ceramic

SPECIFICATIONS

Size (mm)	Step (mm)	Roundness•Cylindricity (μm)	Tolerance (μm)
1 to less than 2 (Steel & Carbide only)	1mm step	0.5	±1
2 to less than 30	1mm step	0.5	±1
30 to less than 50	1mm step	0.8	±1.5

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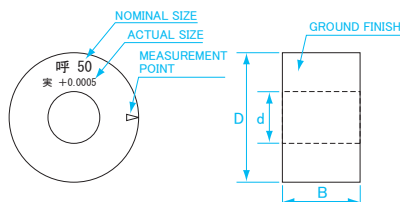
STEEL RING GAUGE OD model



New Product! Available from $\phi 40$ -400mm. Simple calibration or 0 adjustment of outside measuring instrument



DIMENSIONS



SPECIFICATIONS

SizeD (mm)	Step (mm)	OD tolerance (μm)	Out of Roundness (μm)	Out of Cylindricity (μm)	Thickness (mm)	Hole Diameter (mm)
40 to less than 50	10.0 step	±3	1.5	1.5	30	20
50 to less than 70		±5	2.5	2.5		30
70 to less than 100						40
100 to less than 150						50
150 to less than 200		±10	5	5		80
200 to less than 300						160
300 to less than 350						200
350 to less than 375						250
375 to less than 400						

USE • For quick calibration of micrometer

MATERIAL

- Alloy tool steel

FEATURES

- Custom sizes are available up to $\phi 400$
- Size range: 40-400mm

SPECIFICATIONS

- Hardness: HV653-772

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



SPECIAL SHAPE- multiple-step gauge

APPLICATIONS

- Quick calibration of Micrometers(0-25mm)

MATERIAL

- Alloy tool steel

FEATURES

- OD pitch: 5・10・15・20・25mm Integrated type gauge



※Sample of special shape

Custom Designs
for Fast Delivery!

Please contact us
with request



SPECIAL SHAPE- multiple-step gauge/ OD model

APPLICATIONS

- Use for calibration or 0 adjustment

MATERIAL

- Alloy tool steel

FEATURES

- Size combination is arranged on request



※Sample of custom design

Custom Design
for Fast Delivery!

Please contact us
with request

SPECIAL SHAPE- Step gauge/ Inner model

APPLICATIONS

- 0 adjustment for dial bore gauge

MATERIAL

- Alloy tool steel

FEATURES

- Size combination is arranged on request



※Sample of custom design

Custom Designs
for Fast Delivery!

Please contact us
with request

SPECIAL SHAPE- Cut out

APPLICATIONS

- Hold ring gauge in a jig and prevent movement

MATERIAL

- Alloy tool steel



※Sample of custom design

Custom Designs
for Fast Delivery!

Please contact us
with request

BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

TAPER
GAUGES

WELDING
GAUGES

OTHER
GAUGES

USE

- Measurement of gap width

MATERIAL

- SFG series : Stainless steel
- FG series : Carbon tool steel (Hardened)

FEATURES

- Use for assembly or adjustment of automotive engine components or other machines by cutting it to necessary size
- Leaf width: 12.7mm
- 3m and 5m also available



SFG series (Stainless Steel)

Order No.	Model No.	Size	Leaf Width (mm)	Accuracy (mm)	Case size (mm)	Weight
007245	SFG-005-1	0.005×1m	12.7	±0.004	77×77×22	40g
007251	SFG-01-1	0.01 ×1m				
007252	SFG-02-1	0.02 ×1m				
007381	SFG-03-1	0.03 ×1m		±0.005		
007382	SFG-04-1	0.04 ×1m				
007383	SFG-05-1	0.05 ×1m				
007384	SFG-06-1	0.06 ×1m				
007385	SFG-07-1	0.07 ×1m				
007386	SFG-08-1	0.08 ×1m				
007387	SFG-09-1	0.09 ×1m				
007388	SFG-10-1	0.10 ×1m		±0.006		50g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

FG series (Carbon Tool Steel)

Order No.	Model No.	Size	Leaf Width (mm)	Accuracy (mm)	Case size (mm)	Weight	
007253	FG-03-1	0.03 ×1m	12.7	±0.005	77×77×22	40g	
007254	FG-04-1	0.04 ×1m					
007255	FG-05-1	0.05 ×1m					
007256	FG-06-1	0.06 ×1m					
007257	FG-07-1	0.07 ×1m					
007258	FG-08-1	0.08 ×1m					
007259	FG-09-1	0.09 ×1m					
007260	FG-10-1	0.10 ×1m					
007261	FG-11-1	0.11 ×1m		±0.01		77×77×22	50g
007262	FG-12-1	0.12 ×1m					
007263	FG-13-1	0.13 ×1m					
007264	FG-14-1	0.14 ×1m					
007265	FG-15-1	0.15 ×1m					
007270	FG-20-1	0.20 ×1m					
007275	FG-25-1	0.25 ×1m					
007280	FG-30-1	0.30 ×1m					
007282	FG-35-1	0.35 ×1m		±0.012	115×115×22		60g
007284	FG-40-1	0.40 ×1m					
007286	FG-45-1	0.45 ×1m					
007287	FG-50-1	0.50 ×1m					
007289	FG-60-1	0.60 ×1m		±0.02	—		60g
007291	FG-70-1	0.70 ×1m					
007292	FG-80-1	0.80 ×1m					
007293	FG-90-1	0.90 ×1m					
007294	FG-00-1	1.00 ×1m					
						80g	
						90g	
						100g	
						110g	

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

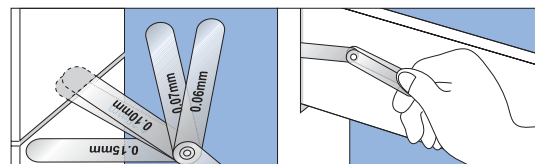
THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

THICKNESS GAUGE



※Leaves can be combined for a wide range of measurements

USE

- Measurement of gap width

MATERIAL

- Carbon tool steel

FEATURES

- Use for precise spacing inspection by inserting into the gap between two flat surfaces
- Indispensable instrument for measuring gap between piston and cylinder of automotive engine
- Leaf width 12.7mm

65M

ACCURACY

Leaf size (mm)	Tolerance (mm)
0.01~0.06	±0.005
0.07~0.10	±0.01
0.11~0.35	±0.015
0.40~0.60	±0.02
0.70~3.00	±0.035

Order No.	Model No.	Leaf Length (mm)	Pieces/ Set	Nominal Size (mm)	Weight
111032	172MA	75	9	0.30 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20	30g
111033	172MB	100			30g
111034	172MC	150			50g
110970	172MD	230			70g
110971	172ME	300			90g
110972	100MR	100	10	0.03 0.04 0.05 0.08 0.10 0.15 0.20 0.25 0.30 0.40	40g
110973	150MR	150			60g
110974	100MK	100	10	0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10	30g
110975	150MK	150			40g
111038	60M	75	19	0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.70 0.80 1.00	60g
111039	100MY	100			80g
111040	150MY	150			120g
111035	65M	75	25	0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.11 0.12 0.13 0.14 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.60 0.70 0.80 0.90 1.00	80g
111036	100MZ	100			100g
111037	150MZ	150			150g
111031	72M	75	12	0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00 2.00 3.00	70g
111044	100MT	100			100g
111045	150MT	150			140g
110976	100ML	100	19	0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00	80g
110977	150ML	150			120g
110978	80M	75	13	0.03 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00 2.00 3.00	60g
111046	100MX	100			90g
111047	150MX	150			140g
111048	100MH	100	10	0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00	80g
111049	150MH	150			110g

THICKNESS GAUGES Leaf

NEW ITEM

T RACEABILITY



S100-05



S150-10

MATERIAL

- Carbon tool steel

SPECIFICATIONS

- Leaf width : 12.7mm

■ Leaf Length : 100mm

Order No.	Model No.	Thickness (mm)
NEW 110801	S100-001	0.01
NEW 110802	S100-002	0.02
NEW 110803	S100-003	0.03
NEW 110804	S100-004	0.04
NEW 110805	S100-005	0.05
NEW 110806	S100-006	0.06
NEW 110807	S100-007	0.07
NEW 110808	S100-008	0.08
NEW 110809	S100-009	0.09
NEW 110810	S100-01	0.10
NEW 110811	S100-02	0.20
NEW 110812	S100-03	0.30
NEW 110813	S100-04	0.40
NEW 110814	S100-05	0.50
NEW 110815	S100-06	0.60
NEW 110816	S100-07	0.70
NEW 110817	S100-08	0.80
NEW 110818	S100-09	0.90
NEW 110819	S100-10	1.00

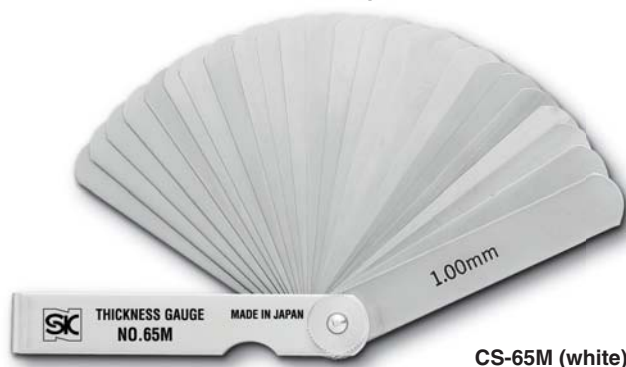
■ Leaf Length : 150mm

Order No.	Model No.	Thickness (mm)
NEW 110820	S150-001	0.01
NEW 110821	S150-002	0.02
NEW 110822	S150-003	0.03
NEW 110823	S150-004	0.04
NEW 110824	S150-005	0.05
NEW 110825	S150-006	0.06
NEW 110826	S150-007	0.07
NEW 110827	S150-008	0.08
NEW 110828	S150-009	0.09
NEW 110829	S150-01	0.10
NEW 110830	S150-02	0.20
NEW 110831	S150-03	0.30
NEW 110832	S150-04	0.40
NEW 110833	S150-05	0.50
NEW 110834	S150-06	0.60
NEW 110835	S150-07	0.70
NEW 110836	S150-08	0.80
NEW 110837	S150-09	0.90
NEW 110838	S150-10	1.00

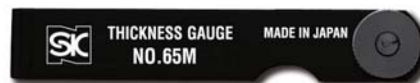
THICKNESS GAUGE with COLOR SLEEVES

Please choose from white, black and green.

• For parts other than 172 series, Threaded pivot so leaves can be removed and replaced.



CS-65M (white)



CS-65M (black)



CS-65M (green)

USE • Measurement of gap width

MATERIAL

- Carbon tool steel

FEATURES

- Use for precise spacing inspection by inserting into the gap between two flat surfaces
- Indispensable for measuring the gap between piston and cylinder of automotive engine
- Leaf width 12.7mm

※ Please specify color (White, Black, Green) when ordering

Model No.	Leaf Length (mm)	Pieces/set	Size (mm)												Weight
CS-172MA	75	9	0.30 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20												30g
CS-172MB	100														30g
CS-172MC	150														50g
CS-172MD	230														70g
CS-172ME	300														90g
CS-100MR	100	10	0.03 0.04 0.05 0.08 0.10 0.15 0.20 0.25 0.30 0.40												40g
CS-150MR	150	10	0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10												60g
CS-100MK	100														30g
CS-150MK	150	10	0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10												40g
CS-60M	75	19	0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.15 0.20												60g
CS-100MY	100														80g
CS-150MY	150														120g
CS-65M	75	25	0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.11 0.12												80g
CS-100MZ	100														100g
CS-150MZ	150														150g
CS-72M	75	12	0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00												70g
CS-100MT	100														100g
CS-150MT	150														140g
CS-100ML	100	19	0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10												80g
CS-150ML	150														120g
CS-80M	75	13	0.03 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30												60g
CS-100MX	100														90g
CS-150MX	150														140g
CS-100MH	100	10	0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00												80g
CS-150MH	150														110g

Other color variation are also available,

please contact us with request.



BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

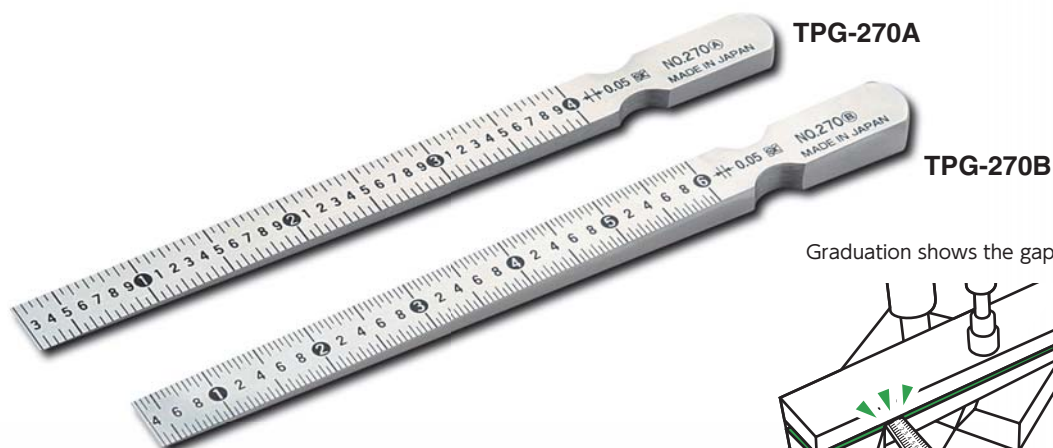
TAPER
GAUGES

WELDING
GAUGES

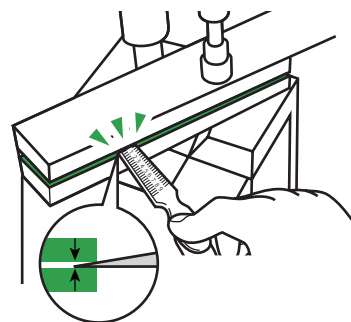
OTHER
GAUGES



TAPER GAUGES



Graduation shows the gap width



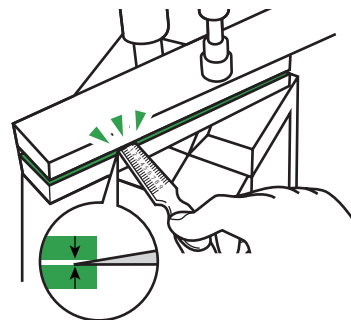
- USE**
 - Measurement of groove and gap etc.
- MATERIAL**
 - Machine grade carbon steel (S55C), not hardened
- FEATURES**
 - Use the thickness of taper to measure the gap width
 - Packed in plastic carrying case
 - Accuracy $\pm 0.04\text{mm}$ • Satin finish

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (H) × (W) (mm)	Weight
007000	TPG-270A	270A	0.3~4	± 0.04	0.05	1°54'33"	160×11	95g
007001	TPG-270B	270B	0.4~6	± 0.04	0.05	2°51'45"	160×11	95g

TAPER GAUGES



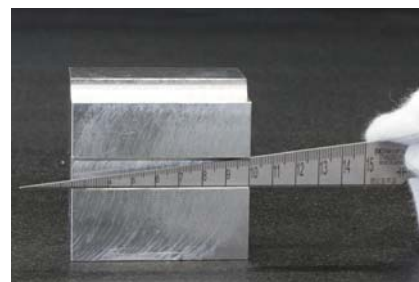
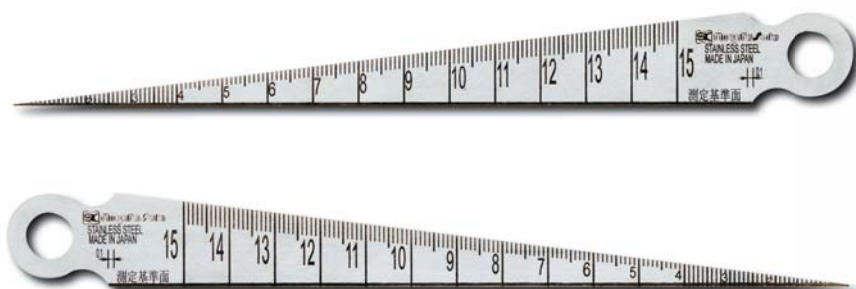
Graduation shows the gap width



- USE**
 - Measurement of groove and gap etc.
- MATERIAL**
 - Machine grade carbon steel (S55C), not hardened
- FEATURES**
 - Use the thickness of taper to measure the gap width, also can use as height adjustment jig
 - Narrow width type
 - Satin finish
 - Packed in plastic carrying case
 - Ball chain attached

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (H) × (W) (mm)	Weight
007002	TPG-270AA	270AA	0.3~3	± 0.04	0.05	1°54'33"	127.5 × 6	18g
007003	TPG-270BB	270BB	0.3~6	± 0.04	0.05	2°51'45"	160 × 6	38g

RIGHT ANGLE TAPER GAUGE



- USE**
 - Measurement of groove and gap etc.
- MATERIAL**
 - Hardened stainless steel (SUS420J2)
- FEATURES**
 - Taper gauge specialized for inner width measurements. One side of gauge rests secure along with the workpiece for a stable measurement.
 - Scale is on the side of gauge to allow reading when top surface is not visible during measurement

Order No.	Model No.	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Product Dimensions Full Length x Width (mm)	Weight
007004	TPG-700T	1~15	±0.05	0.1	7° 9' 10"	148.5	10g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

TAPER GAUGES

T RACEABILITY

Clip style plastic case



Perfect for carrying in shirt pocket

- USE**
 - Use the width of taper to measure the gap width
- MATERIAL**
 - Hardened stainless steel (SUS420J2)
 - Hardness : HV480
- FEATURES**
 - Satin finish
 - Reverse side- scale graduated, hole diameter conversion table
 - Pocket clip style carrying case
 - Scale : Front side- Width scale, Reverse side - Length scale

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (mm)	Thickness (mm)	Weight
007008	TPG-700AC	#700 1-15 with Plastic case	1 ~ 15	± 0.05	0.1	7° 9' 10"	148.5	1.2	10g

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



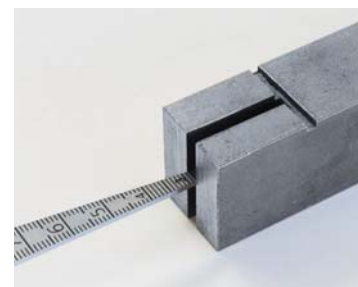
TAPER GAUGES



TPG-700A



TPG-700B



Measurement of gap width



TPG-700C



TPG-700D

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES

- USE** • Measure openings, slot width, hole size etc
- MATERIAL** • Hardened stainless steel (SUS420J2)
• Hardness : HV480
- FEATURES** • Satin finish

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (mm)	Thickness (mm)	Weight
007010	TPG-700A	#700 1-15	1 ~ 15	± 0.05	0.1	7° 9' 10"	148.5	1.2	10g
007011	TPG-700B	#700 15-30	15 ~ 30	± 0.05	0.1	7° 9' 10"	153	1.2	40g
007012	TPG-700C	#700 30-45	30 ~ 45	± 0.05	0.1	7° 9' 10"	159	1.2	60g
007013	TPG-700D	#700 45-60	45 ~ 60	± 0.05	0.1	7° 9' 10"	161.5	1.2	80g



- USE** • Measuring of tubing, bore, slot width, hole size and flange face to face dimension, etc.
- MATERIAL** • Hardened stainless steel(SUS420J2)
- FEATURES** • Convenient set, taper gauge 700A with 130mm ruler
• Folds safely with pocket clip, easy to carry.

Order No.	Model No.	Standard	Weight
007200	TPG-700S	700S	40g

	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Full length (mm)	Taper Angle
Taper gauge	1~ 15	±0.05	0.1	148.5	7° 9' 10"
Ruler	0~130	±0.13	0.5	155	—

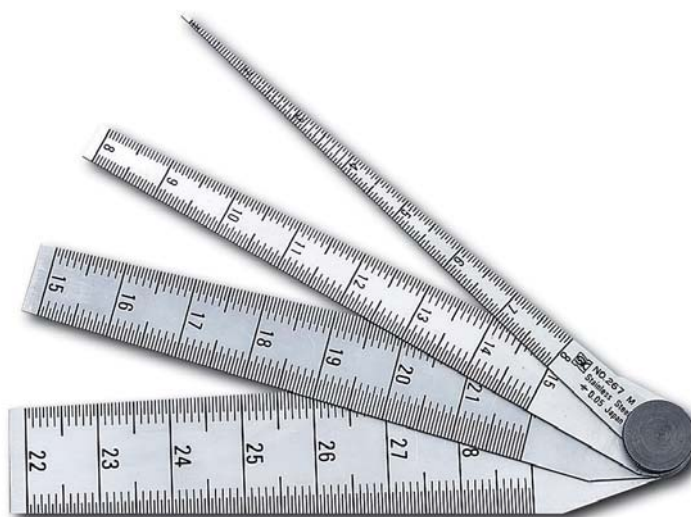
BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

TAPER GAUGES



- USE** • Measurement of slot width and hole size etc.
- MATERIAL** • Hardened stainless steel(SUS420J2)
- FEATURES** • Use the width of taper to check the inside diameter of tubing or hole size
• Number of leaves: 4 pieces (1~8mm, 8~15mm, 15~22mm, 22~29mm)

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Full Length (mm)	Thickness (mm)	Weight
007030	TPG-267M	267M	1~29	±0.05	0.05	144	1.2	80g

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



CIRCULAR TAPER GAUGES



TPG-710A



TPG-710B



TPG-710C

- USE** • Measure hole size or gap width
- MATERIAL** • TPG-710A : SK Steel, TPG-710B/710C : Carbon steel for machine structural use
• Grip : Free cutting steel
- FEATURES** • Cylindrical type
• Silver finish

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (mm)	Weight
007100	TPG-710A	710A	1 ~ 6	± 0.05	0.1	5° 44'	93	20g
007101	TPG-710B	710B	4 ~ 15	± 0.05	0.1	5° 44'	175	140g
007102	TPG-710C	710C	4 ~ 25	± 0.05	0.1	5° 44'	290	550g

CIRCULAR TAPER GAUGES



TPG-715A

- USE** • Use for measuring hole size or gap width
- MATERIAL** • Gauge : SK Steel (Non-Hardened)
• Case : Brass
- FEATURES** • Silver finish
• Comes with a protective cap for the gauge tip

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (mm)	Weight
007150	TPG-715A	715A	0.1 ~ 3	± 0.05	0.1	5° 43' 29"	118.5	33g
007151	TPG-715B	715B	1 ~ 6	± 0.05	0.1	5° 43' 29"	168	80g

CIRCULAR TAPER GAUGE WITH GREEN COLOR GRIP



GAUGES

06

New line-up with Green Aluminum Grip



CGTPG-710A



CGTPG-710B



CGTPG-710C

USE • Measure hole size or gap width

MATERIAL

- Gauge : SK steel (CGTPG-710A), Carbon steel for machine structure use (CGTPG-710B & CGTPG-710C)
- Grip : Anodized aluminum

FEATURES

- Sliver finish

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (mm)	Weight
007103	CGTPG-710A	710A	1 ~ 6	± 0.05	0.1	5° 44'	93	20g
007104	CGTPG-710B	710B	4 ~ 15	± 0.05	0.1	5° 44'	175	140g
007105	CGTPG-710C	710C	4 ~ 25	± 0.05	0.1	5° 44'	290	550g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

CIRCULAR TAPER GAUGE WITH GREEN COLOR CASE



New line-up. Circular taper gauge with green case



CCTPG-715A

USE • Use for measuring hole size or gap width

MATERIAL

- Gauge : SK steel
- Anodized aluminum

FEATURES

- Comes with a protective cap for the gauge tip

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Full Length (mm)	Weight
007152	CCTPG-715A	715A	0.1 ~ 3	± 0.05	0.1	5° 43' 29"	118.5	33g
007153	CCTPG-715B	715B	1 ~ 6	± 0.05	0.1	5° 43' 29"	168	80g

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES



SLIDE TAPER GAUGES

Clip-style
slide casePerfect for carrying in shirt
pocket

- USE**
- Measurement of tubing, bore, slot width, hole size etc.
- MATERIAL**
- Hardened stainless steel (SUS420J2)
 - Hardness : HV480
- FEATURES**
- Satin finish
 - Clip-type slide case for safe and convenient carrying
 - Gauge tip is rounded for safety
 - Slide into case for storage

Order No.	Model No.	Standard	Measuring Range (mm)	Accuracy (mm)	Graduation (mm)	Taper Angle	Weight
007201	TPG-700SL	700SL	1~9	±0.05	0.1	7° 9' 10"	20g

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

PLASTIC TAPER GAUGES



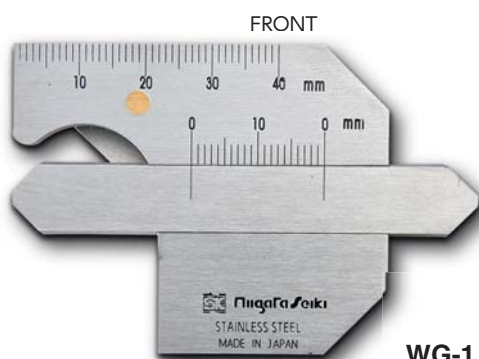
can put in a pocket

- USE**
- Measure openings, slot width, hole size, etc.
- MATERIAL**
- Polycarbonate
- FEATURES**
- Scratch resistant
 - Clip design

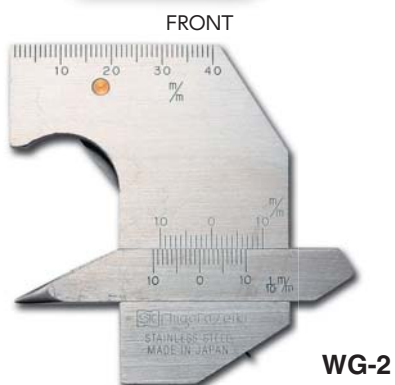
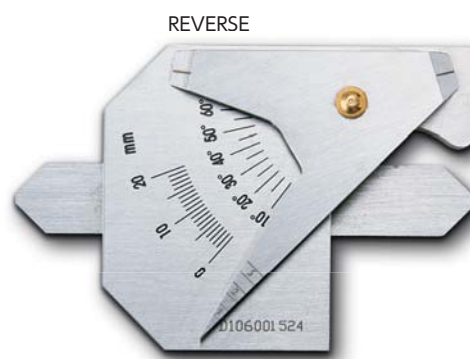
Order No.	Model No.	Standard	Measuring range (mm)	Accuracy (mm)	Graduation (mm)	Weight
007040	TPG-800	800	1~15	±0.2	0.1	5g

GAUGES

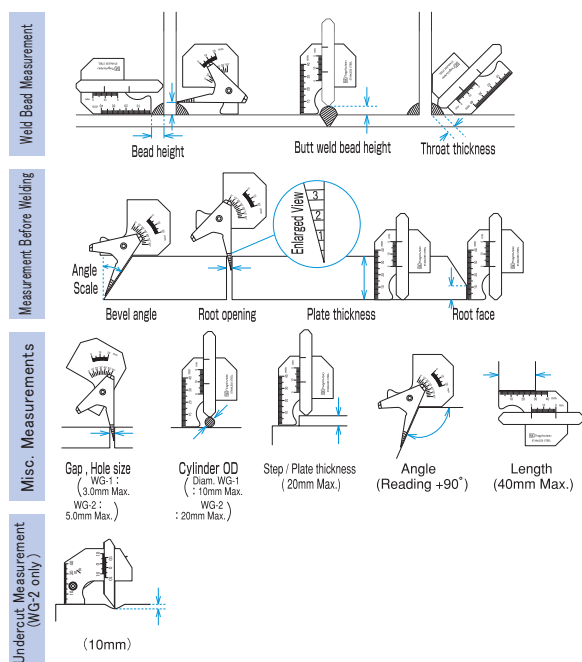
THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES



WG-1



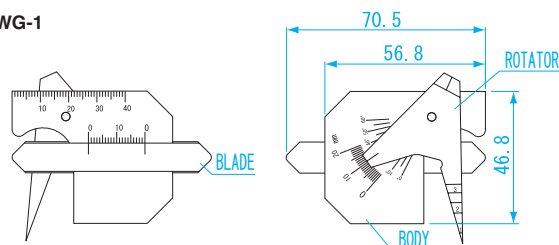
WG-2



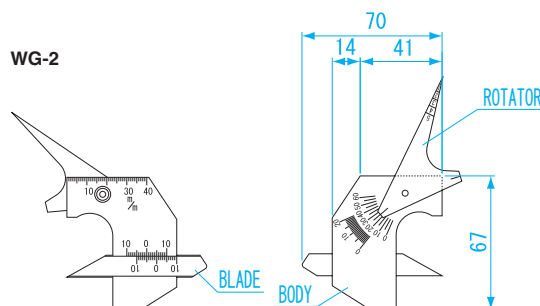
DIMENSIONS

Units : mm

WG-1



WG-2



USE • For measuring fillet weld, bead weld, etc.

MATERIAL • Stainless steel (SUS410)

FEATURES • Efficient for welding and quality control
• Tough and portable (with vinyl case)

Order No.	Model No.	Measurement Accuracy for Throat Thickness of Fillet Weld	Bevel Angle Accuracy	Accuracy	Weight
007502	WG-1 (M)	± 0.4mm	± 0.7°	± 0.4mm	79g
007503	WG-2 (L)	± 0.2mm	± 0.7°	± 0.4mm	91g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

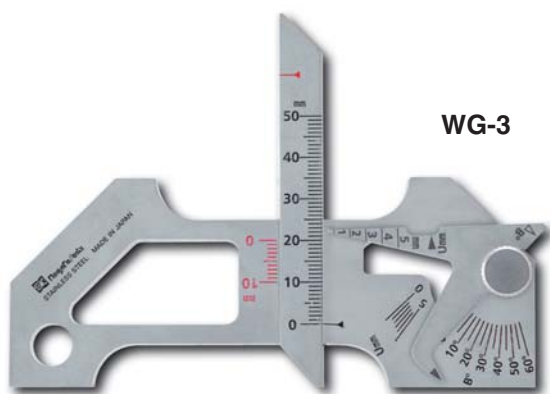
WELDING GAUGES

OTHER GAUGES

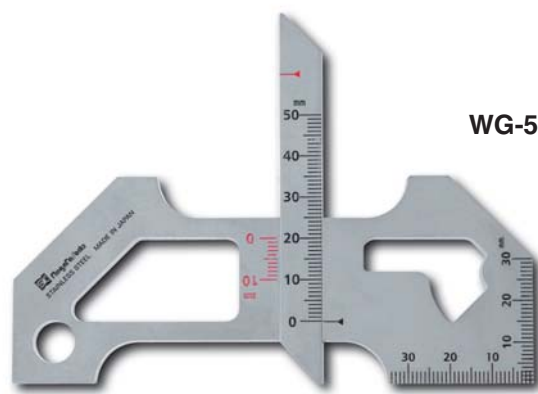


WELDING GAUGE

New product! Gauges with new features added to existing welding gauge line-up
Measure weld reinforcement height up to 50mm



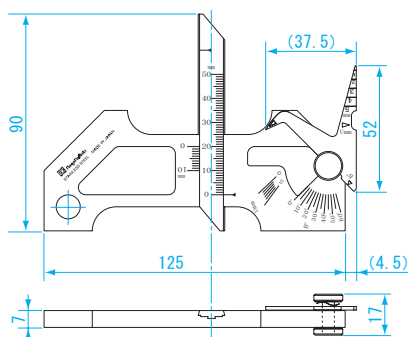
WG-3



WG-5

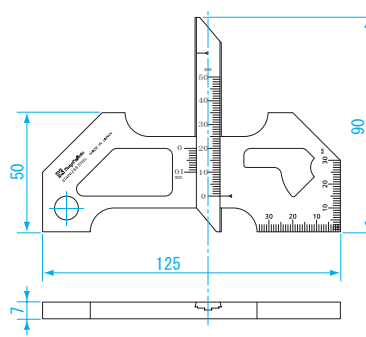
DIMENSIONS

Units : mm



DIMENSIONS

Units : mm



USE • Measurement of size and alignment of bead, gap size, undercut, etc.

MATERIAL

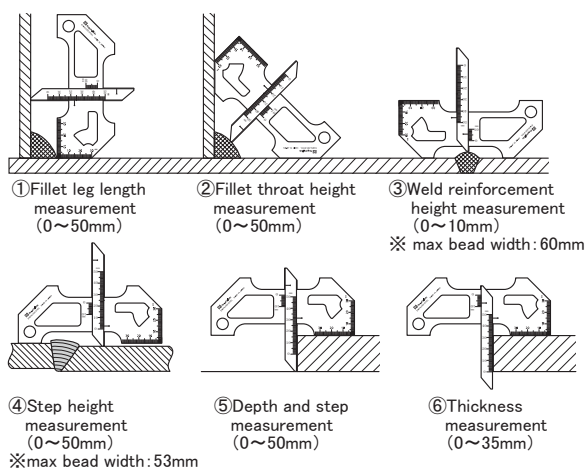
- Stainless Steel (SUS410) Silver finish

FEATURES

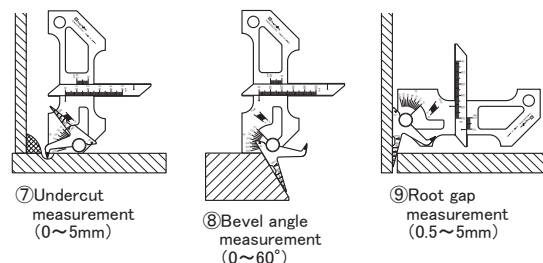
- Speed up and streamline the quality control of welding
- Measures weld reinforcement height up to 50mm
- Wide base for stability during measurements
- Pivoting gauge provides a variety of measurement functions
- Translucent case for easy confirmation of contents

Measurement Functions

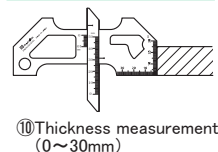
WG-3, WG-5 capabilities



WG-3 only



WG-5 only



Order No.	Model No.	Weight
N _{FT} 007506	WG-3	198g
N _{FT} 007507	WG-5	187g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

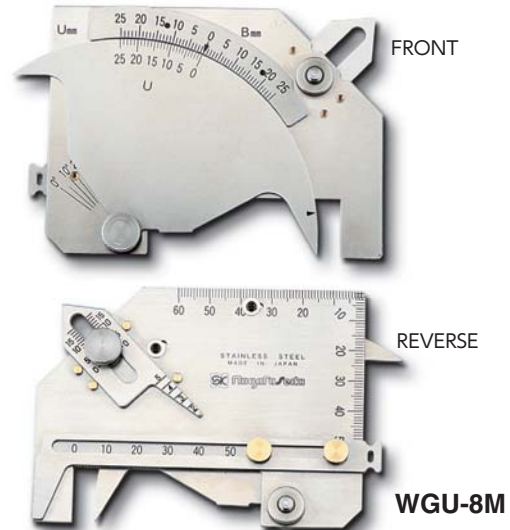
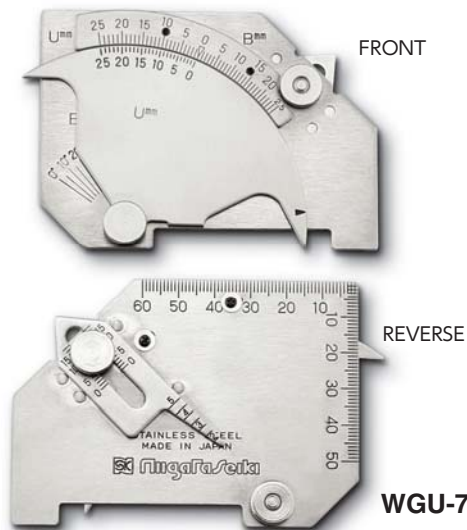
RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

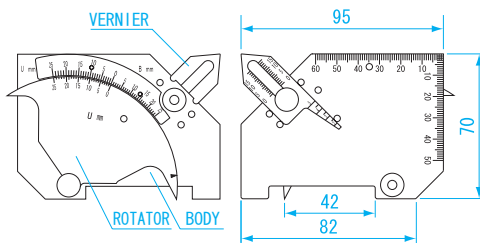
WELDING GAUGES

OTHER GAUGES



DIMENSIONS

Units : mm



USE • For wide of variety welding measurements

Undercut depth/ Groove angle/ Inconsistent level
Height of fillet weld & bead weld/ Throat thickness of fillet
Root opening/ Plate thickness

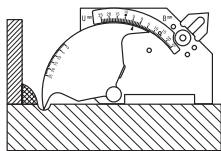
MATERIAL • Stainless steel (SUS410)

FEATURES

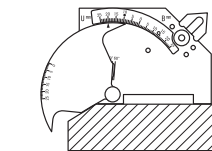
- Long usage life, rust and corrosion resistant and extremely durable as well as being light weight
- Very convenient to the welding process involving steel frame assembly such as general welding, ship building, bridge construction, etc.
- Easy reading scale

MEASUREMENT FUNCTION

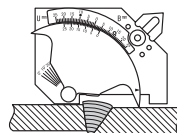
WGU-7M, WGU-8M, WGU-9M common functions



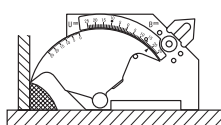
① Undercut depth (0~25mm)



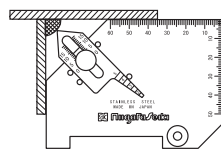
② Bevel angle (WGU-7M: 0~60°)
(WGU-8M-WGU-9M: 0~70°)



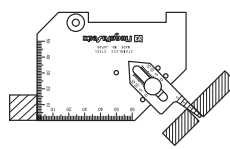
③ Bead striding width (WGU-7M: 42mm)
(WGU-8M-WGU-9M: 53mm)
Step difference (0~25mm)



④ Height of fillet & bead weld (0~25mm)



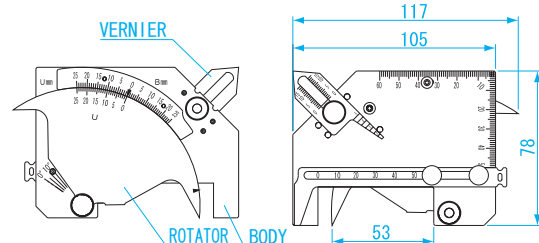
⑤ Throat thickness of fillet weld (0~15mm)



⑥ Root opening (2~5mm)
⑦ Plate thickness (scale)

DIMENSIONS

Units : mm



USE • For wide of variety welding measurements

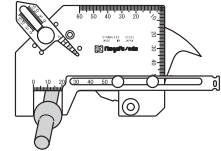
Undercut depth/ Groove angle/ Inconsistent level
Height of fillet weld & bead weld/ Throat thickness of fillet
Root opening/ Plate thickness/ External diameter of circular workpiece/ Width of bead weld

MATERIAL • Stainless steel (SUS420J2)

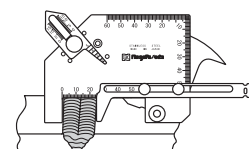
FEATURES

- Additional function for measurement of external diameter of circular workpiece, swelling of pressure welding of reinforcing iron and width of bead weld
- Bead stride width: 53mm
- Bevel angle range: 0-70°
- Easy reading scale

WGU-8M, WGU-9M common functions



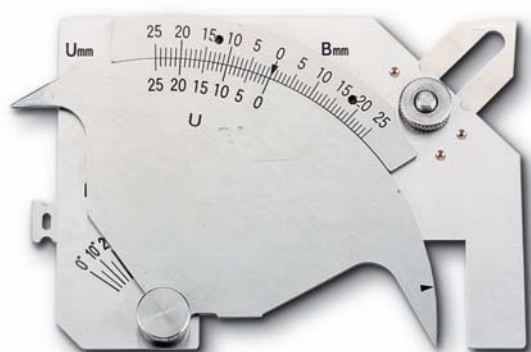
⑧ External diameter of circular workpiece
WGU-8M: up to 30mm
WGU-9M: up to 50mm



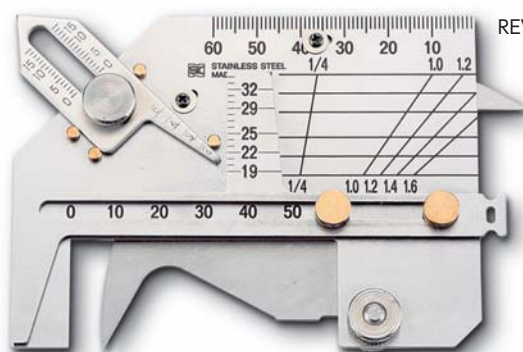
⑨ Width of bead weld (0~53mm)

Order No.	Model No.	Weight
007513	WGU-7M	150g
007514	WGU-8M	190g

WELDING GAUGE



FRONT



REVERSE

USE

- For a wide variety of welding measurements
- Undercut depth/ Groove angle/ Inconsistent level
- Height of fillet weld & bead weld/ Throat thickness of fillet
- Root opening/ Plate thickness/ External diameter of circular workpiece/ Width of bead weld

MATERIAL

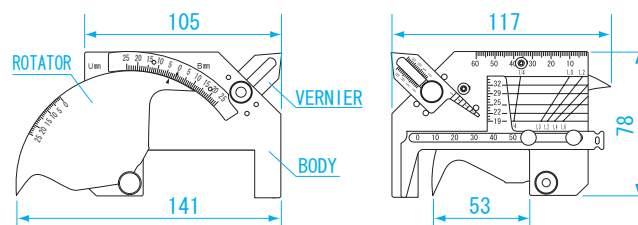
- Stainless steel (SUS420J2)

FEATURES

- Additional functions for measurement of
 - external diameter of circular workpiece
 - swelling of pressure welded reinforcing iron
 - width of bead weld
- Bead stride width: 53mm
- Bevel angle range: 0-70°
- Higher accuracy undercut measurement function

DIMENSIONS

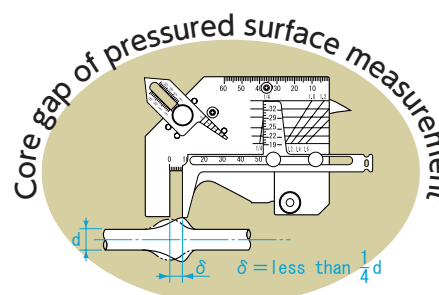
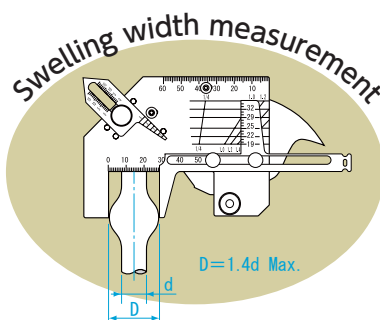
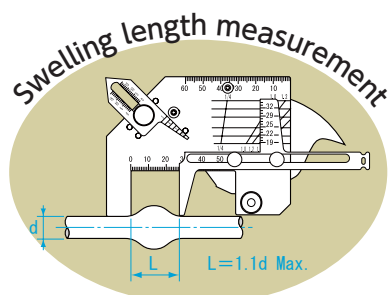
Units : mm



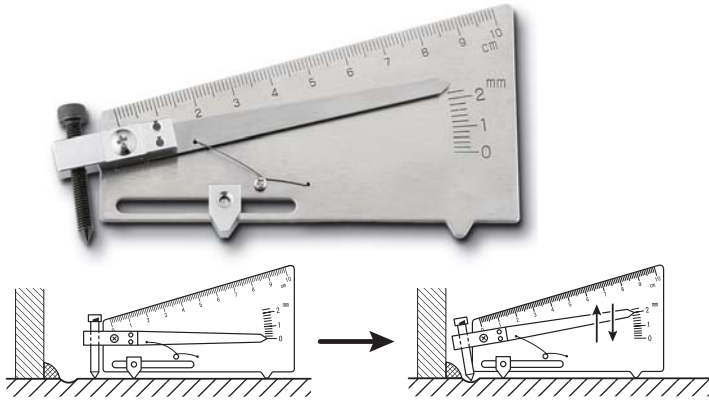
Additional functions

Provides quick way to measure the diameter of welded rebar to insure proper dimensions of weld seam.

Scale marked for material diameter (ϕ 19, 20, 25, 29, 32) corresponding to various rebar diameters, and amount of expansion (1/4, 1.0~1.6). You can quickly find the ratio by reading the intersection of the two scale lines.

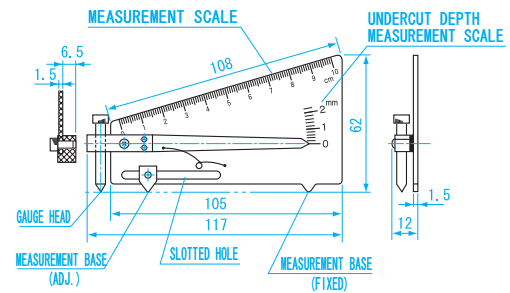


Order No.	Model No.	Rebar diameter (mm)	Expansion	Weight
007515	WGU-9M	ϕ 19 ~ 35	1/4, 1.0 ~ 1.6	190g



DIMENSIONS

Units : mm



Zero Adjustment

1. Press this gauge to the measuring sample.
2. Adjust Zero point adjustment screw to indicate 0, insuring that all three points contact surface.

Measurement

After 0 adjustment, put the tool on undercut and the spring will move indicator arm to show depth of undercut on graduation.

- USE** • For undercut depth and length measurement (Scale range : 0-2mm)
- MATERIAL**
 - Stainless steel (SUS410)
- FEATURES**
 - Easy to measure depth and length of undercut
 - Capable of 0 adjustment with screw type of gauge head
- SPECIFICATIONS**
 - Exclusive use for undercut measurement (minimum reading : 0.2mm)

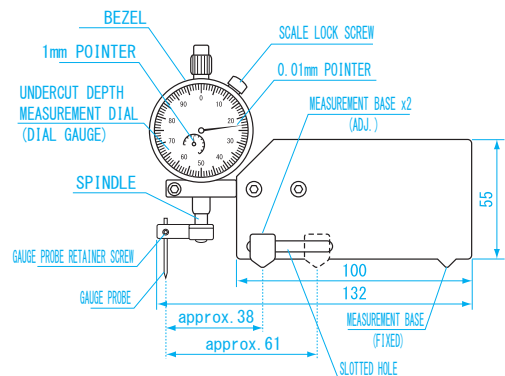
Order No.	Model No.	Weight
007521	WGU-2S	100g

WELDING GAUGE

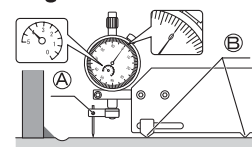


DIMENSIONS

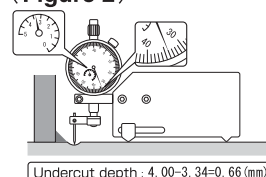
Units : mm



(Figure 1)



(Figure 2)



Zero Adjustment

Recommended to be performed on a flat surface such as a surface plate.

- ① Loosen GAUGE PROBE RETAINER SCREW using hex key.
- ② Place Welding Gauge on surface insuring all three points of MEASUREMENT BASE are making contact (2x ADJ. 1x FIXED) and push on SPINDLE shaft. When 1mm POINTER indicates 4.00mm, tighten GAUGE PROBE RETAINER SCREW. (Insure that probe tip is in contact with the surface plate)

Measurement

- ① Place the gauge on a flat surface and rotate BEZEL to indicate 0.01mm. (Figure 1)
- ② Place PROBE tip on weld undercut point to be measured. (Figure 2)
- ③ Undercut value is obtained by subtracting Dial Gauge reading from 4.00mm.

- USE** • Exclusive use for undercut measurement
- FEATURES**
 - Stainless steel (SUS420J2)
 - Easy and accurate to measure depth and length of undercut
 - Dial gauge type performs more precise measurement
 - Three point support for stable measurement
- SPECIFICATIONS**
 - Measurement range : 0 ~ 4.00mm
 - Minimum reading : 0.01mm
 - Accuracy : ± 0.04 mm
 - Width of measurement base : ≈ 23 mm

Order No.	Model No.	Weight
007520	FDW-1	280g

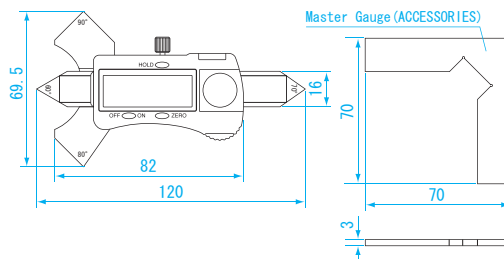
DIGITAL WELDING GAUGE

Essential for welding process. Digital welding gauge specialized for measuring fillet weld and bead weld height
Provided with zero setting master gauge



DIMENSIONS

Units : mm



USE • For measuring the size of fillet weld and bead weld

MATERIAL

- Stainless steel

FEATURES

- Easy to read with digital display
- Bevel angle: 60° , 70° , 80° , 90°
- Master gauge included
- Hold function

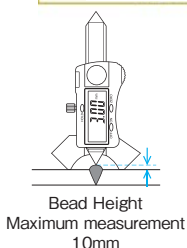
SPECIFICATIONS

- Throat thickness : 20mm
- Bead height : 10mm
- perating temperature : 0 ~ 40°C

POWER

- SR44 or LR44, one included for testing

Weld reinforcement height measurement

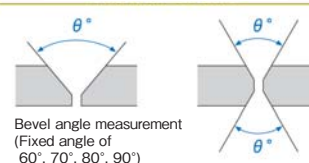


Bead Height
Maximum measurement
10mm

Measurement before welding process



Throat thickness
Maximum measurement
20mm

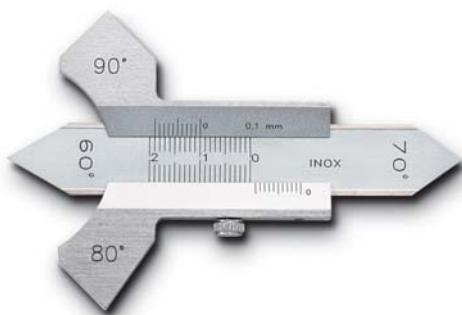


Bevel angle measurement
(Fixed angle of
60°, 70°, 80°, 90°)

Order No.	Model No.	Resolution (mm)	Accuracy※ (mm)	Weight
007526	DWG-20G	0.01	± 0.03	130g

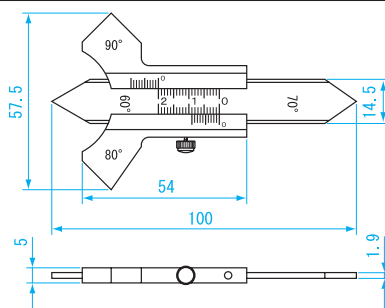
※ Quantization Error (± 1 digit) not included

WELDING GAUGE



DIMENSIONS

Units : mm



USE • Use for measuring the size of fillet weld and bead weld

MATERIAL

- Stainless steel

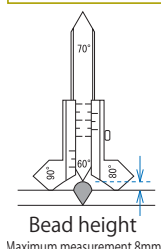
FEATURES

- Bevel angle: 60° 70° 80° 90°

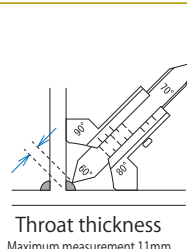
SPECIFICATIONS

- Fillet weld : 11mm
- Bead weld : 8mm
- Accuracy: ± 0.2mm
- Minimum reading : 0.1mm

Weld Bead Measurement

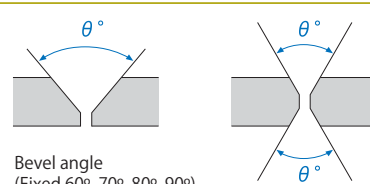


Bead height
Maximum measurement 8mm



Throat thickness
Maximum measurement 11mm

Measurement Before Welding



Bevel angle
(Fixed 60°, 70°, 80°, 90°)

Order No.	Model No.	Weight
007516	AWG-10	80g

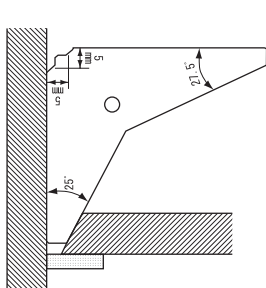


WAL2542

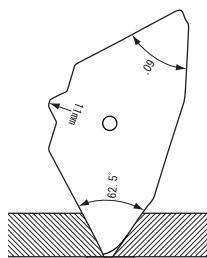


WAL4562

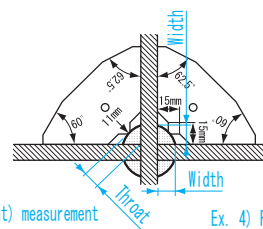
Example use



Ex. 1) Joint gap angle (inside) measurement



Ex. 2) Butt joint gap angle measurement



Ex. 3) Fillet weld (throat) measurement

Ex. 4) Fillet weld width measurement

USE • For measuring bevel angle of T-joint (interior angle), bevel angle of facing joint (interior angle), leg length (height), and throat thickness of fillet weld

MATERIAL

- SUS304

FEATURES

- Indication of size limit for easy judgement (angle step by 2.5°, throat thickness step by 1mm)
- Set of 4 pieces
- Provided with plastic case and ball chain

SPECIFICATIONS

Model No.		WAL2542				WAL4562			
Blank No.		1	2	3	4	1	2	3	4
Outline Dimension (mm)	Overall width	92				92			
	Overall height	46	45	44	43	43	44	45	46
	Plate thickness	1.5				1.5			
Material/ Finish		SUS304 /barrel semi-gloss finish				SUS304 / barrel semi-gloss finish			
Measurement Value Indication	Angle degree (Both side)	25°	30°	35°	40°	45°	50°	55°	60°
		27.5°	32.5°	37.5°	42.5°	47.5°	52.5°	57.5°	62.5°
	Throat thickness (Front)	4	5	6	7	8	9	10	11
		5	7	8	10	11	13	14	15
Accuracy		Fillet weld·Reinforcement±0.1mm/ Angle ±1°				Fillet weld·Reinforcement±0.1mm / Angle ±1°			

Order No.	Model No.	Weight
007550	WAL2542	100g
007551	WAL4562	120g

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

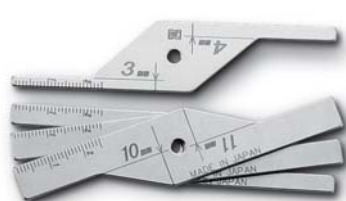
THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

OTHER GAUGES

ROOT LIMIT GAUGE

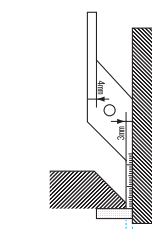


WRL310

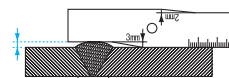


WRL1118

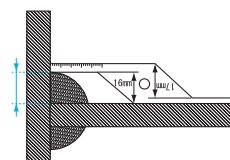
Example use



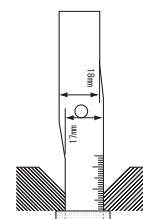
Ex. 1) T-joint root thickness measurement



Ex. 2) Butt joint reinforcement height measurement



Ex. 3) Fillet weld width measurement



Ex. 4) Butt joint root thickness measurement

USE

- Use for measuring root gap of T-joint or facing joint, leg length (height) of fillet weld and excess weld and height of facing joint

MATERIAL

- SUS304

FEATURES

- Measure with 1mm interval
- The measurement result of root thickness will be indicated on the scale
- Measurement range chosen so most frequently used dimensions are combined
- Provided with plastic case & ball chain

SPECIFICATIONS

Model No.		WRL310				WRL1118			
Blank No.		1	2	3	4	1	2	3	4
Outline dimension (mm)	Overall width	90				90			
	Overall height	20				20			
	Plate thickness	2				2			
Material/ Finish		SUS304 / barrel semi-gloss finish				SUS304 / barrel semi-gloss finish			
Measurement Value Indication	Root gap (Front)	3·4	5·6	7·8	9·10	11·12	13·14	15·16	17·18
	Leg length-height (Back)	16·17	14·15	12·13	10·11	8·9	6·7	4·5	2·3
	Root side(Front)	20				20			
	Plate thickness	20				20			
Accuracy		±0.1mm				±0.1mm			

Order No.	Model No.	Weight
007560	WRL310	60g
007561	WRL1118	90g

WELDING ELECTRODE GAUGE



※Sample of custom design

Custom Designs
with Fast Delivery

Please contact us
with request

- USE • Use for measuring height of welding electrode

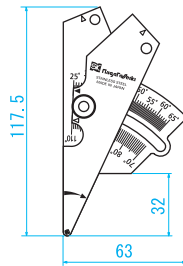
- MATERIAL • SUS420J2

New Product. Specialized for angle measurement of grooves with minimum reading 0.5°



DIMENSIONS

Units : mm



USE • Butt angle measurement and gap angle measurement

MATERIAL • Stainless(SUS410)

FEATURES

- Measurement of butt joint gap angle
- Sharpened tip enables measurement for root gap of 0mm, or when sheet thickness is less than 15mm
- Minimum reading 0.5° , large scale for easy reading
- T-joint gap angle can be measured avoiding weld buildup
- Non-reflective satin finish for easy to read scale
- Solid and convenient carrying.(Provided with plastic carrying case)

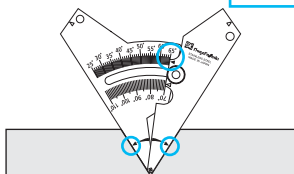
SPECIFICATIONS

- Bevel angle : 25 ~ 65° (Minimum graduation: 0.5°)
- Angle of cross weld part : 70-110°

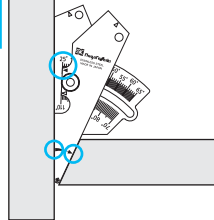
Example use

1) Butt joint gap angle measurement
(Max. Inside Angle 65° :
Plate Thickness :30mm)

• How to Read the value
for examples 1) & 2)
Angle between ◀ marks
indicated at ▶

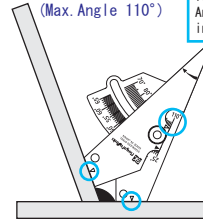


2) T-joint gap angle measurement
(Min. Inside Angle 25° :Plate Thickness: 30mm)

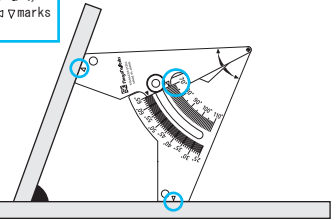


3) Angle of cross
weld part
(Max. Angle 110°)

• How to Read the value
for examples 3) & 4)
Angle between ◀ marks
indicated at ▶



4) Angle of cross weld part
(Min. Angle 70°)



SPECIFICATIONS

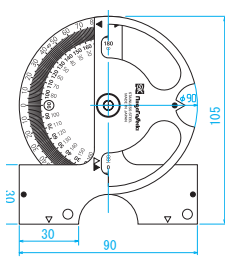
Order No.	Model No.	Accuracy of angle	Weight
007518	WGA-65	± 0.5°	73.5g

ANGLE PROTRACTOR

New Product. Specialized for angle measurement. 3 measurement points enable multiple angle measurements

DIMENSIONS

Units : mm



USE • Measuring angles for sheet metal bending, welding flanges and butt joints, openings and bevels, scissors plates, etc.

MATERIAL • Stainless steel (SUS410)

FEATURES

- Enables a wide range of angle measurements before and after welding process
- Direct measurement can be done without interference from swelling or weld bead
- Can measure sheet metal bends and outside angle measurements
- Non-reflective satin finish for easy to read scale
- Solid and convenient carrying (provided with plastic case)

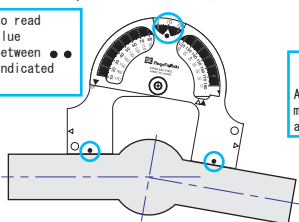
SPECIFICATIONS

- Bevel angle : Scissors angle 30-130° (Minimum graduation : 1°)
- Bending angle and angle of butt weld joint : 0 ~ 90°
- Stud and beam angle after welding : 0 ~ 180°

Example use

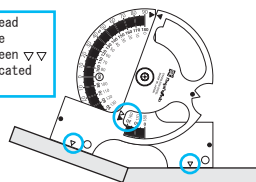
Example 1) Angle measurement of bent butt weld (0-90° :Example indicates 10°)

• How to read the value
Angle between ● marks indicated at ●



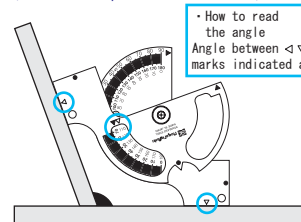
Example 2) Angle measurement of bent Flange and metal plate (0-180° :Example indicates 20°)

• How to read the value
Angle between ▼ marks indicated at ▶



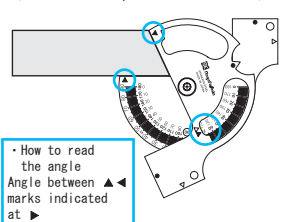
Example 3) Angle of cross weld part (0-180° :Example indicates 110°)

• How to read the angle
Angle between ◀ marks indicated at ▶



Example 4) Plate bevel angle (30-130° :Example indicates 65°)

• How to read the angle
Angle between ▲ marks indicated at ▶



SPECIFICATIONS

Order No.	Model No.	Accuracy of angle	Weight
007519	AP-130	± 0.5°	100g



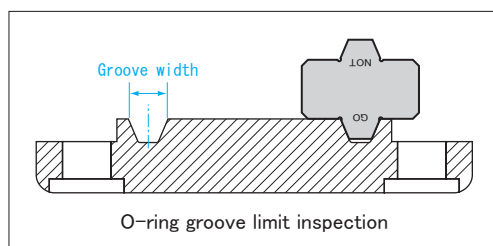
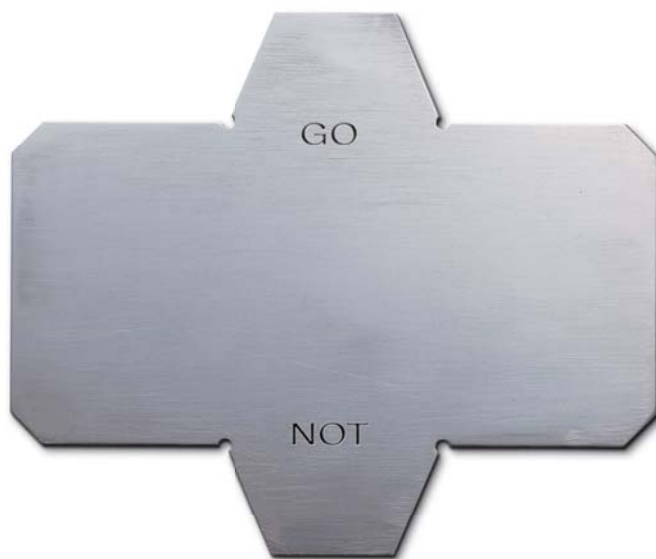
Measurement function and List

Process	No.	Categories	Figures	Applicable Model															
Machining and Assembly (Before welding)	1	T joint Gap		✓	✓	✓	✓	—	✓	✓	✓	—	—	✓	—	—	—	—	—
	2	Lap joint Gap		✓	✓	✓	✓	—	✓	✓	✓	—	—	✓	—	—	—	—	—
	3	Misalignment of Butt weld		✓	✓	✓	✓	—	✓	✓	✓	—	—	✓	—	—	—	—	—
	4	Root Openings		✓	✓	✓	✓	—	✓	✓	✓	—	—	✓	—	—	—	—	—
	5	Root gap of T-joint		—	—	—	—	—	—	—	—	—	—	✓	—	—	—	—	—
	6	Root Face		—	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	—	—	—	—	—
	7	Bevel Angle		—	✓	✓	✓	—	✓	✓	✓	—	—	—	—	—	—	—	✓
	8	Groove angle		—	—	—	—	—	—	—	—	—	—	—	✓	✓	✓	✓	—
	9	T-joint gap angle		—	—	—	—	—	—	—	—	—	—	—	✓	—	—	✓	—
	10	Edg Misalignment		—	✓	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—
After Welding	11	Leg length (height) of Fillet Weld		—	✓	✓	✓	✓	✓	✓	✓	—	—	✓	✓	—	—	—	—
	12	Throat Thickness of Fillet Weld		—	✓	✓	✓	✓	✓	✓	✓	—	—	—	✓	✓	✓	—	—
	13	Height of Butt weld Overlay		—	✓	✓	✓	✓	✓	✓	✓	—	—	✓	—	✓	✓	—	—
	14	Height of T-joint weld Overlay		—	✓	✓	✓	✓	✓	✓	✓	—	—	✓	—	✓	✓	—	—
	15	Undercut		—	—	✓	✓	—	✓	✓	✓	✓	✓	—	—	—	—	—	—
	16	Misalignment of Butt Weld		—	—	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—
	17	Bending angle and angle of butt weld joint		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	✓
	18	Angle of Cross weld part		—	—	—	—	—	—	—	—	—	—	—	—	—	—	✓	✓
	19	Stud angle after welding		—	—	—	—	—	—	—	—	—	—	—	—	—	—	✓	✓
	20	Irregularity of Bead Surface		—	—	—	—	—	—	✓	✓	—	—	—	—	—	—	—	—
Pressure welding	21	Swelling diameter		—	—	—	—	—	—	△※	✓	—	—	—	—	—	—	—	—
	22	Swelling length		—	—	—	—	—	—	—	△※	✓	—	—	—	—	—	—	—
	23	Misalignment of Pressured Surface		—	—	—	—	—	—	—	△※	✓	—	—	—	—	—	—	—
	24	Bending angle		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	✓

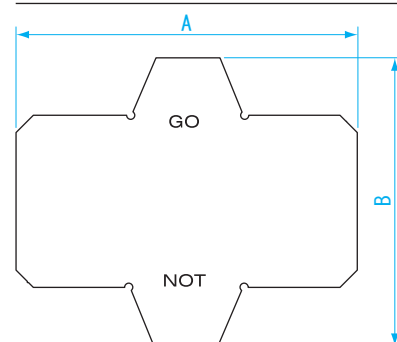
※ Measures dimension of weld, relative amount must be calculated.

SPECIFICATIONS

Model No.	Material	Scale	Height of Bead Weld	Height of Fillet Weld	Throat thickness of fillet weld	Undercut depth	Root Opening	Width of Bead Weld	Welding Bar Diameter	Length Accuracy	Beveling(groove) angle	Bending angle and angle of butt weld joint	Stud and beam angle after welding	Angle Accuracy
WG-1	Stainless steel SUS410 Plate thickness: 4.3mm	40mm	10mm	20mm	10mm	—	0.5~3mm	—	10mm	±0.4mm	0~60° Minimum reading value: 5°	—	—	±0.7°
WG-2	Stainless steel (SUS410) Plate thickness: 4.9mm			10mm Minimum reading 0.1		10mm	0.5~5mm		20mm	±0.2mm (gap measurement ±0.4mm)				
WG-3	Stainless steel SUS410 Plate thickness 7mm Satin finish	30~35mm	10mm	50mm	50mm	10mm	0.5~5mm	—	10mm	±0.4mm	0~60° Minimum reading value: 5°	—	—	±0.7°
WG-5						—	—		—	—	—			
WGU-7M	Stainless steel (SUS410) Plate thickness: 1.5mm	50~60mm	25mm	25mm	15mm	25mm	2~5mm	0~53mm	30mm	±0.4mm (Throat thickness measurement ±0.7mm—manufacturing accuracy)	0~60° Minimum reading value: 5°	—	—	±2°
WGU-8M	Stainless steel (SUS420J2) Plate thickness: 1.5mm								50mm	—	0~70° Minimum reading value: 5°			
WGU-9M	Stainless steel (SUS420J2) Plate thickness: 1.5mm	60mm												
WGU-2S	Stainless steel (SUS410) Plate thickness: 1.5mm	100mm	—	—	—	2mm	—	—	—	±0.1mm	—	—	—	—
FDW-1	Stainless steel (SUS420J2) Plate thickness: 1.5mm					4mm				±0.04mm				
AWG-10	Stainless steel Thickness: Body: 5mm, Blade: 1.9mm	—	8mm	—	11mm	—	—	—	—	±0.2mm	60~70~80~90° fixed	—	—	—
DWG-20	Stainless steel Thickness: Body: 5.2mm Blade: 2.7mm Display: 13.5mm		10mm							±0.05mm				
WRL310	Stainless steel (SUS304) Plate thickness: 2mm	20mm	10~17mm (1mm step)	10~17mm fixed (1mm step)	—	—	3~10mm fixed (1mm step)	—	—	±0.1mm	—	—	—	—
WRL1118	Stainless steel (SUS304) Plate thickness: 2mm		2~9mm (1mm step)	2~9mm fixed (1mm step)						—				
WAL2542	Stainless steel (SUS304) Plate thickness: 1.5mm	—	—	5~7~8~10mm fixed	4~7mm fixed (1mm step)	—	—	—	—	±0.1mm	25~27.5~30~32.5 35~37.5~40~42.5° fixed	—	—	±1°
WAL4562	Stainless steel (SUS304) Plate thickness: 1.5mm			11~13~14~15mm fixed	8~11mm fixed (1mm step)					—	45~47.5~50~52.5 55~57.5~60~62.5° fixed			
WGA-65	Stainless steel SUS410 Plate thickness 1.5mm Satin finish	—	—	—	—	—	—	—	—	—	25~65° Minimum reading value: 0.5°	—	70~110°	±0.5°
AP-130											30~130° Minimum reading value: 1°		0~90°	0~180°



DIMENSIONS



BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

GAUGES

USE • Limit gauge for measuring width of O-ring groove

MATERIAL

- SUS420J2 (Polished finish)

FEATURES

- GO/NO GO standard conforms to JPI-7S-23
- Groove width accuracy : $\pm 0.20\text{mm}$
- Groove depth accuracy : $\pm 0.41/0\text{mm}$
- Groove bottom corner radius tolerance:
Less than 1.5mm ...+0.8mm
More than 1.5mm ... $\pm 0.8\text{mm}$
- Angle accuracy : $\pm 0.5^\circ$

Units : mm

Model No.	A	B
GSW-1	40	35
GSW-2	40	35
GSW-3	60	50
GSW-4	60	50
GSW-5	80	60
GSW-6	80	60
GSW-7	80	70

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

Order No.	Model No.	Compatible O-Ring No	Groove Width (mm)	Groove Depth (mm)	Groove Bottom Corner Radius	Weight
007471	GSW-1	21,23,24,26,27,30,31,34,35,37,39,41,44,45,49,53,57,61,65,69,82,84,92,99	7.92	11.91	0.8	11g
007472	GSW-2	28,32,46,73	9.52	13.49	1.5	11g
007473	GSW-3	38,50,54,62,66,77,86,87	11.13	16.66	1.5	22g
007474	GSW-4	42,47,70,74,88,89,93,94,95	12.70	19.84	1.5	22g
007475	GSW-5	51,58,96,97,98	14.27	23.01	1.5	35g
007476	GSW-6	63,78	15.88	26.97	1.5	35g
007477	GSW-7	55,67,71,100	17.48	30.18	1.5	40g

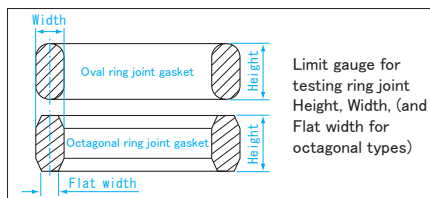
TAPER
GAUGES

WELDING
GAUGES

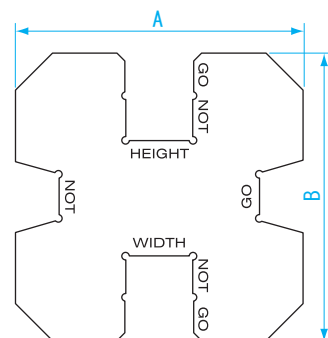
OTHER
GAUGES



GASKET LIMIT GAUGE for width and height measurement



DIMENSIONS



Units : mm

Model No.	A	B
GST-1	80	80
GST-2	80	80
GST-3	80	80
GST-4	120	120
GST-5	120	120
GST-6	140	140
GST-7	140	140

USE • Limit gauge for GO / NO GO testing of ring joint gaskets

MATERIAL

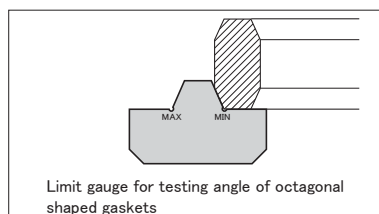
- SUS420J2 (Polished finish)

SPECIFICATIONS

- GO/NO GO standard conforms to JPI-7S-23
- Gasket width accuracy : $\pm 0.20\text{mm}$
- Gasket height accuracy : $\pm 0.5/0\text{mm}$
- Octagonal corner radius accuracy : $\pm 0.5\text{mm}$

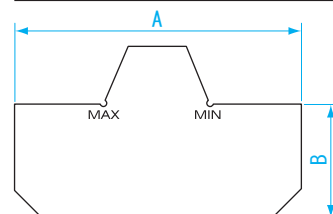
Order No.	Model No.	Compatible Gasket No.	Gasket Width (mm)	Gasket Height (mm)	Octagonal Corner Radius (mm)	Weight
007478	GST-1	21,23,24,26,27,30,31,34,35,37,39,41,44,45,49,53,57,61,65,69,82,84,92,99	11.13	15.7	1.5	53g
007479	GST-2	28,32,46,73	12.70	17.5	1.5	53g
007480	GST-3	38,50,54,62,66,77,86,87	15.88	20.6	1.5	110g
007481	GST-4	42,47,70,74,88,89,93,94,95	19.05	23.9	1.5	110g
007482	GST-5	51,58,96,97,98	22.22	26.9	1.5	110g
007483	GST-6	63,78	25.40	31.8	2.3	139g
007484	GST-7	55,67,71,100	28.58	35.1	2.3	139g

OCTAGONAL GASKET LIMIT GAUGE



DIMENSIONS

Units : mm



USE • Limit gauge for GO/ NO GO testing of angle for octagonal ring joint gaskets

MATERIAL

- SUS420J2 (Polished finish)

SPECIFICATIONS

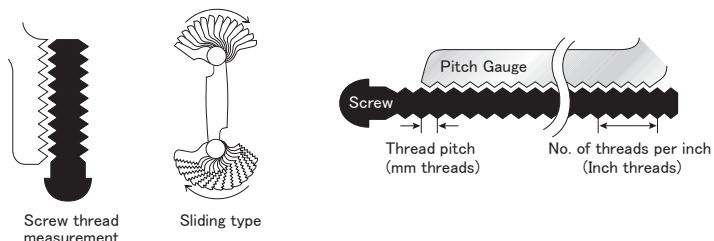
- Conform to JPI-7S-23 standards
- Dimensional tolerance of angle : $\pm 0.5^\circ$

Order No.	Model No.	Width A (mm)	Height B (mm)	MAX	MIN	Weight
007485	OG-1	50	20	23° 30'	22° 30'	10g
007486	OG-2	60	27	23° 30'	22° 30'	18g



W26

- USE** • Use for measuring screw pitch
- MATERIAL** • Machine grade carbon steel
- FEATURES** • Pitch is marked on leaf



Order No.	Model No.	Indication unit	Number of leaves	Pitch size	Weight
110961	M28	mm	28	0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 1 1.1 1.2 1.25 1.3 1.4 1.5 1.6 1.7 1.75 1.8 1.9 2 2.5	40g
110962	W26	inch	26	4 4 1/2 5 6 7 8 9 10 11 12 13 14 16 18 19 20 22 24 25 26 28 30 32 40 48 60	40g

BLOCK
GAUGES

PIN
GAUGES

PIN
VISE

PIN
GAUGE
ACCESSORIES

CENTER GAUGE



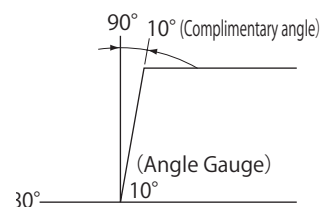
ANGLE GAUGE



SG-60M

- USE** • Use for inspection of the angle of lathe center, angle of the tool for screw cutting, etc
- MATERIAL** • Machine grade carbon steel
- FEATURES** • Can check the angle of tool bits and tool edges

Order No.	Model No.	Angle	Graduation	Accuracy	Weight
007541	SG-60M	60°	0~25mm 0.5mm step, 1mm step	±1°	10g
007542	SG-55I	55°	0~1inch 1/14 inch step, 1/20 inch step	±1°	10g



- USE** • Use for inspection of internal angle
- MATERIAL** • Stainless steel
- FEATURES** • 11 leaves on each side, range of 1° ~45°
• The angle marked on each leaf is complementary angle

Order No.	Model No.	Graduation	Accuracy	Weight
110931	AG-22	1 2 3 4 5 6 7 8 9 10 12 14 14.5 15 16 18 20 25 30 35 40 45°	±20'	200g

GAUGES

THREAD
GAUGES

PLUG
GAUGES

RING
GAUGES

THICKNESS
GAUGES

TAPER
GAUGES

WELDING
GAUGES

OTHER
GAUGES



RADIUS GAUGE



- USE** • Use for checking the radius curve of dies, jigs, and wooden molds, etc.
- MATERIAL**
 - Machine grade carbon steel
- FEATURES**
 - Concave and convex leaves are separated.



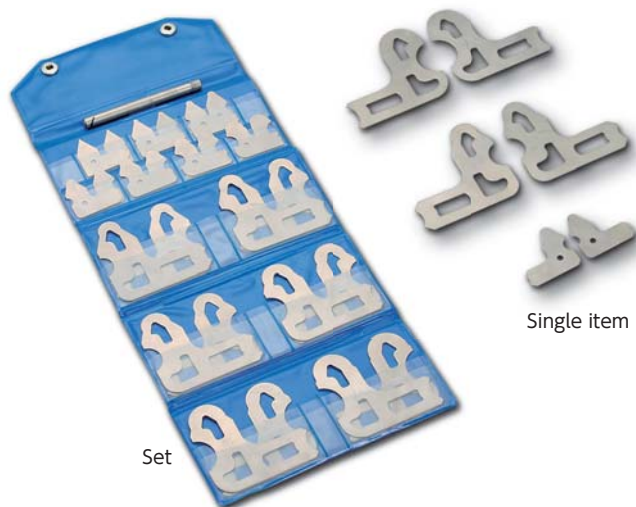
RG-32

Order No.	Model No.	Number of Leaves per set	Details of Radius Dimension (mm)	Accuracy (mm)	Weight
110923	RG-34	34	1.0~3.0 (0.25 step) 3.5~7.0 (0.5 step)	±0.1	65g
110922	RG-32	32	7.5~15.0 (0.5 step)	±0.1	115g
110921	RG-30	30	15.5~20.0 (0.5 step) 21.0~25.0 (1.0 step)	±0.1	110g

RADIUS GAUGE (Set/ Single part)

BLOCK
GAUGESPIN
GAUGESPIN
VISEPIN
GAUGE
ACCESSORIES

GAUGES

THREAD
GAUGESPLUG
GAUGESRING
GAUGESTHICKNESS
GAUGESTAPER
GAUGESWELDING
GAUGESOTHER
GAUGES

Set

Single item

SPECIFICATIONS (Single part)

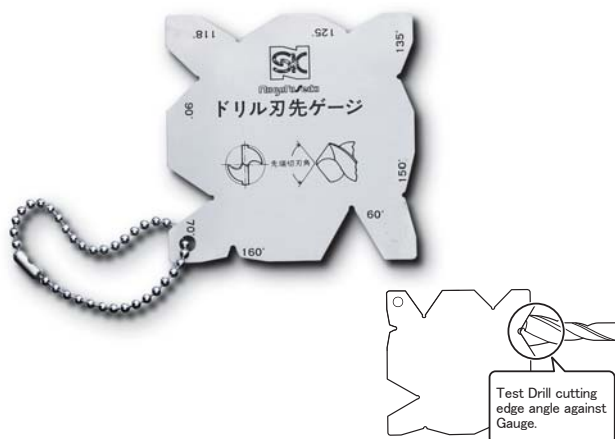
Order No.	Model No.	Detail of Radius Dimension (mm)
110881	RGL-05	0.5
110882	RGL-10	1.0
110883	RGL-15	1.5
110884	RGL-20	2.0
110885	RGL-25	2.5
110886	RGL-30	3.0
110887	RGL-35	3.5
110888	RGL-40	4.0
110889	RGL-45	4.5
110890	RGL-50	5.0
110891	RGL-55	5.5
110892	RGL-60	6.0
110893	RGL-65	6.5
110894	RGL-70	7.0
110895	RGL-75	7.5
110896	RGL-80	8.0
110897	RGL-85	8.5
110898	RGL-90	9.0
110899	RGL-95	9.5
110900	RGL-100	10.0
110901	RGL-105	10.5
110902	RGL-110	11.0
110903	RGL-115	11.5
110904	RGL-120	12.0
110905	RGL-125	12.5
110906	RGL-130	13.0

- USE** • For checking radius curve of dies, jigs and wooden mold etc.
- MATERIAL**
 - Machine grade carbon steel
- FEATURES**
 - Each size is separated, suitable for measuring difficult to access parts

SPECIFICATIONS (radius gauge set)

Order No.	Model No.	Pieces per set	Detail of Radius Dimension (mm)
110875	RG-26S	26	0.5~13.0 (0.5 step)
Accuracy (mm)		Weight	
±0.1		290g	

DRILL TIP GAUGE



- USE** • Use for measuring drill-tip after grinding (60° 70° 90° 118° 125° 135° 150° 160°)
- MATERIAL** • Stainless steel (SUS420J2)
- FEATURES**
 - 8 types of edge angle gauges are useful when grinding
 - 2mm scale to measure length of drill tip
 - Provided with ball chain

Order No.	Model No.	Product Dimension W×H×D (mm)	Accuracy	Weight
007531	DPG-A	77×77×1	±1.5°	11g

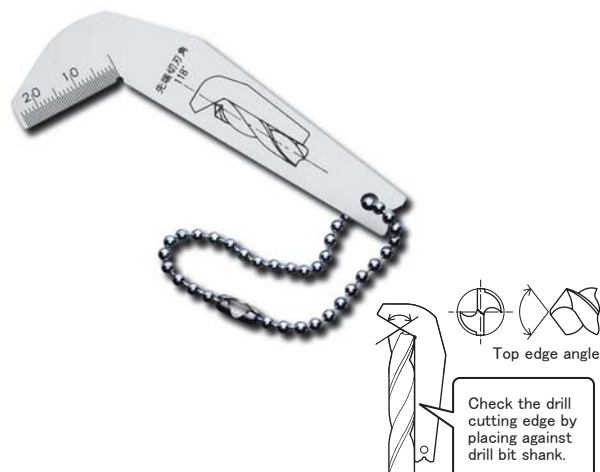
DRILL POINT GAUGE



- USE** • Use for measuring the drill edge length range of 3mm-45mm, right and left side
- MATERIAL** • Carbon tool steel
- FEATURES**
 - Provided with ball chain
 - Rotating tip angle gauge (Marking at 60° 70° 90° 125° 135° 150°)
 - Tip angle : 118°
 - Drill edge length : 3 ~ 45mm

Order No.	Model No.	Product Dimension (mm)	Accuracy	Weight
007535	DP-118	Base:22×110×8 Rotor:7.5×50×2 Main Scale:68×9	±1.5°	160g

DRILL TIP GAUGE



- USE** • Use for measuring drill-tip after grinding (118°)
- MATERIAL** • Stainless steel (SUS420J2)
- FEATURES**
 - Confirms drill tip edge angle after grinding
 - Provided with ball chain

Order No.	Model No.	Product Dimension L×D (mm)	Accuracy	Weight
007532	DPG-118	90×0.5	±1.5°	10g

SLIDING DRILL POINT GAUGE



- USE** • Maintenance management of drill point angle
• Use for measuring the drill tip edge length range of 3-40mm
- MATERIAL**
 - Stainless steel (SUS420J2) Satin finish
- FEATURES**
 - Tip angle : 118°
 - Drill edge length : 3~40mm

Order No.	Model No.	Accuracy	Weight
007536	S-118	±1.5°	150g



GAUGES

06

BLOCK GAUGES

PIN GAUGES

PIN VISE

PIN GAUGE ACCESSORIES

GAUGES

THREAD GAUGES

PLUG GAUGES

RING GAUGES

THICKNESS GAUGES

TAPER GAUGES

WELDING GAUGES

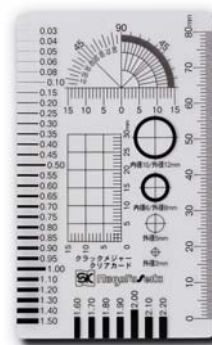
OTHER GAUGES

CHAMFER MEASURING GAUGE **T** TRACEABILITY

CRACK GAUGE/ CLEAR CARD TYPE



CM-P



CM-C

USE • Use for measuring the size of all kinds of chamfer

MATERIAL

- Stainless steel (SUS420J2)

FEATURES

- Measure chamfer circumference of workpiece on lathe
- For milling, measure hole chamfer on workpiece
- Measurement range : 0 ~ 15C
- Minimum reading : 0.5mm

USE • Use for measuring cracks

MATERIAL

- Polyester

FEATURES

- CM-P: can measure width and length of cracks
- CM-C: can measure width, angle and length of cracks
- Flexible, transparent polyester makes it easy to use
- Portable (Business card size)

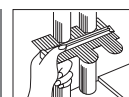
Order No.	Model No.	Product Dimension (mm)	Accuracy (mm)	Weight
006990	CMG-10	Overall Length 71.6×2 Side Length 16	±0.25	20g

Order No.	Model No.	Product Dimension (H) × (W) × (D) (mm)	Weight
111162	CM-P	91×55×0.175	1g
111163	CM-C	91×55×0.175	1g

PROFILE GAUGE



Example of Use



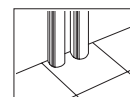
1. Push profile gauge against desired sample



3. Cut workpiece to shape



2. Transfer profile to workpiece



4. A perfect fit made easy

USE

- Use for recording the cross-sectional shape of a surface

MATERIAL

- Pin material : Stainless steel

FEATURES

- Pins are thin and can easily record a smooth curve

SPECIFICATIONS

- Active Length: 150mm

Order No.	Model No.	Product Dimension (mm)	Weight
011440	CG-100S	155×84	210g

HOW TO USE PIN GAUGE

Measuring Tool Checking



Caliper Checking

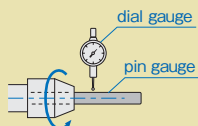


Micrometer Checking



Height Gauge Checking

Center Runout Measurement



Drilling Machine Runout Measurement

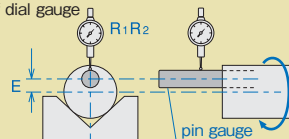


Chuck Runout Measurement

Hole eccentricity Measurement



R1... Max. reading of dial gauge
R2... Min. reading of dial gauge
$$E = \frac{R1 - R2}{2}$$



Dovetail Measurement



Determination of channel width



Determination of channel width



Width measurement of milling slot

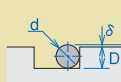
Key way and etc



Groove depth measurement

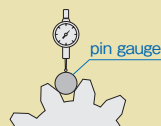


δ ... Dial gauge reading
 $D = d + \delta$



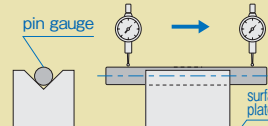
Gear tooth measurement

Dial gauge measurement

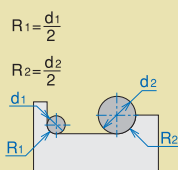


Measuring V groove parallelism

Dial gauge measurement



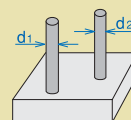
Radius measurement



Hole diameter measurement



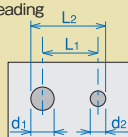
GO / No-Go Pin Gauges also available



Measurement between holes



$d1 \cdot d2$... Pin Gauge diameters
 $L2$... Micrometer reading
$$L1 = L2 - \frac{d1 + d2}{2}$$



Mill tool positioning



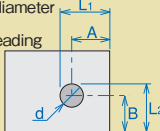
Measurement of hole position, parallelism



Measuring hole center position
 d ... Pin Gauge diameter
 $L1 \cdot L2$... Dial gauge reading

$$A = L1 - \frac{d}{2}$$

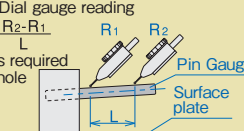
$$B = L2 - \frac{d}{2}$$



Slope of hole (parallelism measurement)

$R1 \cdot R2$... Dial gauge reading
$$\text{Slope} = \frac{R2 - R1}{L}$$

Repeat as required for each hole



06

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OTHER GAUGES

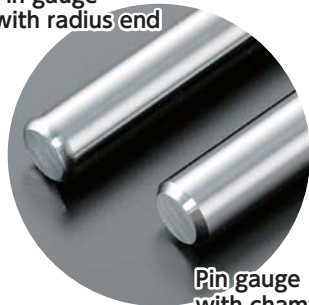


SPECIAL SHAPES

Custom shape pin gauges available upon request

Pin gauges for special applications

Pin gauge with radius end



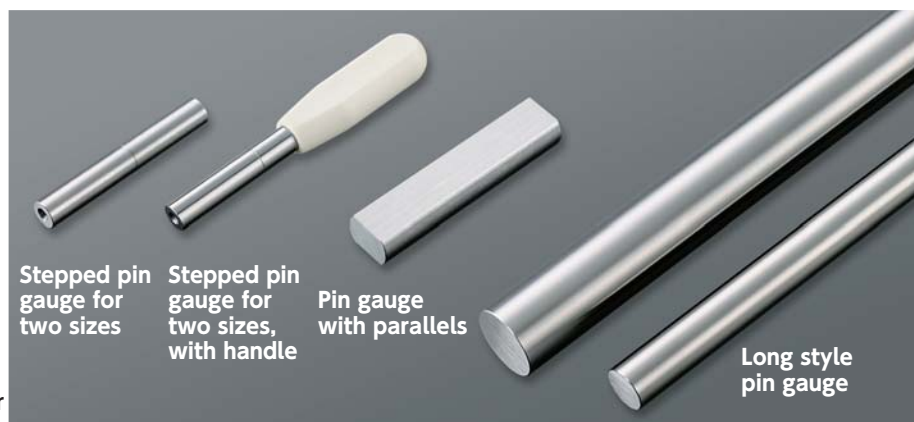
Pin gauge with chamfer

Stepped pin gauge for two sizes

Stepped pin gauge for two sizes, with handle

Pin gauge with parallels

Long style pin gauge



Custom Ring gauges. Stepped gauges, special shapes available upon request.

Ring gauges for special applications

Custom marking also available

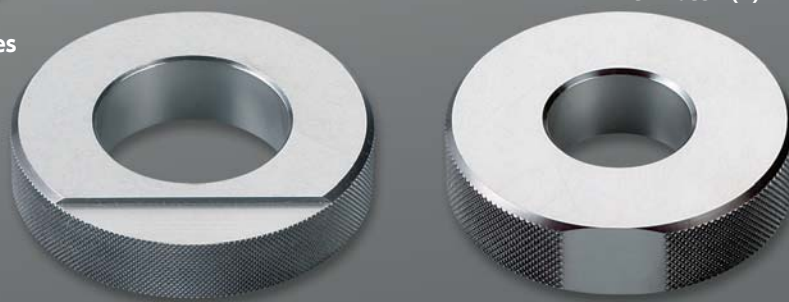


Ring gauge with included OD standard

Stepped ring gauge for two sizes

Ring gauge with notch(A)

Ring Gauge with notch (B)



Please contact us with request

BLOCK GAUGES

PIN GAUGES

PIN VISE

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