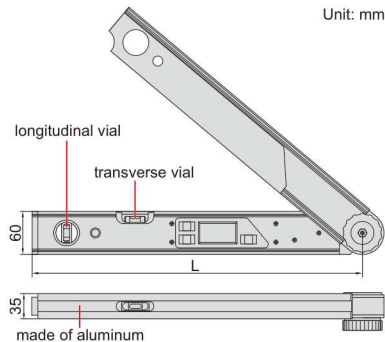


## WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

AUTOMATIC  
BACKLIGHT

ABSOLUTE  
LEVEL

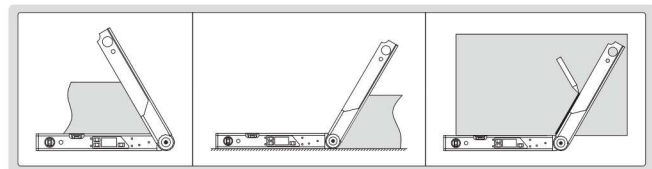
IP54  
WATERPROOF



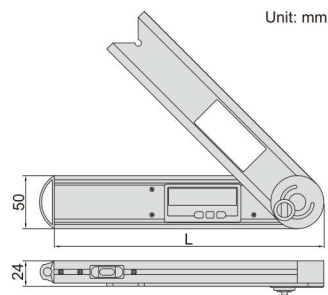
2174-225

- Suitable for setting horizontal and vertical mitre angles of cutting machines
- Buttons: ON/OFF, HOLD/SUP, SPR/CNR/MTR/BVL
- IP54 dust/waterproof
- With transverse and longitudinal vials
- 2xAAA batteries
- Absolute level, zero setting is not needed when batteries are replaced
- Backlight turns off in one minute after reading is stable, automatic power off in 5 minutes

Code	Size (L)	Range	Resolution	Accuracy
2174-225	460mm	0-225°	0.05°	±0.10°



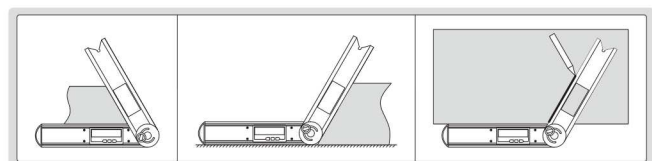
## DIGITAL PROTRACTOR



2171-250

- Buttons: on/off, hold (keep the reading), zero, ABS (absolute and incremental measurement)
- Fix the locking screw at 4 positions for different measuring ranges: 0°~225°, -225°~0°, -45°~180°, -180°~45°
- Remove the locking screw for 360° range
- With level vial
- Battery CR2032, automatic power off

Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0-360°	0.05°	±0.15°

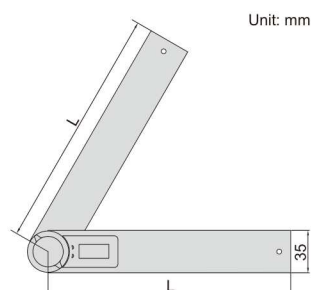




## DIGITAL PROTRACTORS

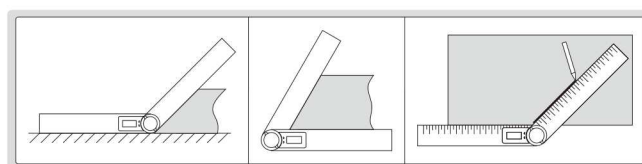


2176-200



- Buttons: on/off, zero
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- Made of stainless steel
- CR2032 battery
- Automatic power off

Code	Size (L)	Range	Resolution	Accuracy
2176-200	200mm	0-360°	0.1°	±0.3°
2176-300	300mm	0-360°	0.1°	±0.3°



10

ATTENTION: NO  
DATA OUTPUT

## DIGITAL PROTRACTORS

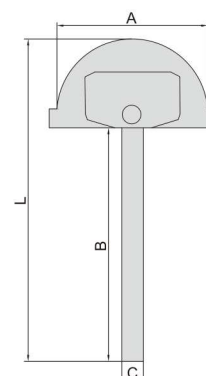
the reading can turn over



4779-120

- Range: 0-180°
- Buttons: on/off, zero, hold/turn
- Made of stainless steel
- With clamping screw

Code	Size (AxB)	Resolution	Accuracy	L	C
4779-120	120×150mm	0.05°	±0.3°	221mm	22mm
4779-150	150×200mm	0.05°	±0.3°	286mm	22mm
4779-200	200×300mm	0.05°	±0.3°	409mm	22mm





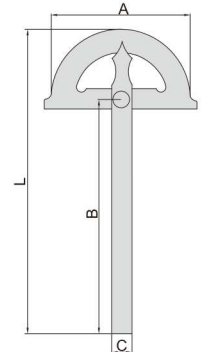
## PROTRACTORS

- Graduation: 1°
- Made of stainless steel  
(4799-1300 is made of carbon steel)
- Satin chrome plated scale
- With clamping screw



4799-180

Code	Size (AxB)	Range	Accuracy	L	C
4799-180	80x120mm	0-180°	±0.3°	168mm	11mm
4799-1120	120x150mm	0-180°	±0.3°	220mm	14mm
4799-1150	150x200mm	0-180°	±0.3°	285mm	16mm
4799-1200	200x300mm	0-180°	±0.3°	413mm	20mm
4799-1300	300x500mm	0-180°	±0.3°	675mm	30mm



## DIGITAL PROTRACTORS

10

ATTENTION: NO  
DATA OUTPUT

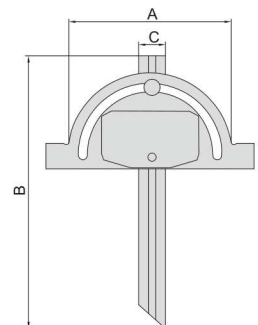
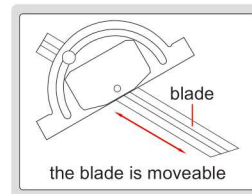
the reading can turn over



4778-100

- Range: 0-180°
- Buttons: on/off, zero, hold/turn
- Made of stainless steel
- With clamping screw
- The blade is moveable

Code	Size (AxB)	Resolution	Accuracy	C
4778-100	126x150mm	0.05°	±0.3°	22mm
4778-150	150x300mm	0.05°	±0.3°	22mm
4778-200	200x400mm	0.05°	±0.3°	24mm



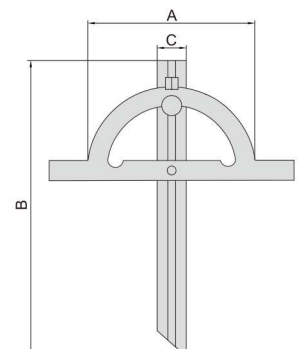
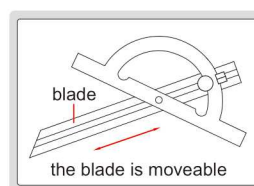
## PROTRACTORS

- Graduation: 1°
- Made of carbon steel
- Satin chrome plated
- With clamping screw
- The blade is moveable



4797-100

Code	Size (AxB)	Range	Accuracy	C
4797-100	100x150mm	10-170°	±0.3°	18mm
4797-150	150x300mm	10-170°	±0.3°	22mm
4797-200	200x400mm	10-170°	±0.3°	24mm
4797-250	250x500mm	10-170°	±0.3°	28mm
4797-300	300x600mm	10-170°	±0.3°	32mm

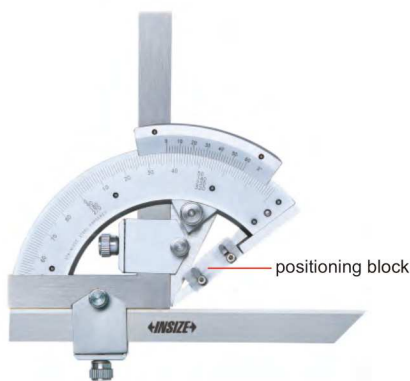




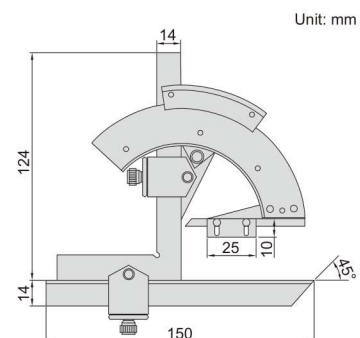
## PROTRACTORS



2374-320

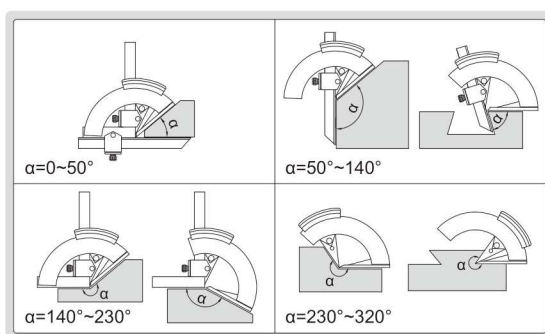


2374-320D



Unit: mm

- Made of stainless steel
- Satin chrome plated scale



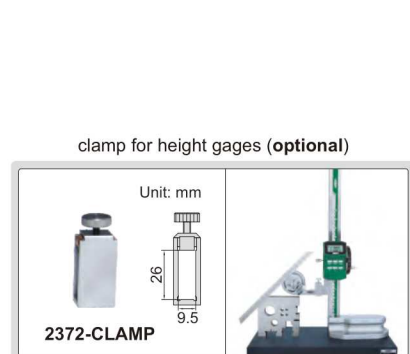
application of 2374-320D



The positioning block can be moved down for positioning, and moved up when not in use

Code	Range	Graduation	Accuracy	Remark
2374-320	0-320°	2'	±2'	without positioning block
2374-320D	0-320°	2'	±2'	with positioning block

## UNIVERSAL PROTRACTOR

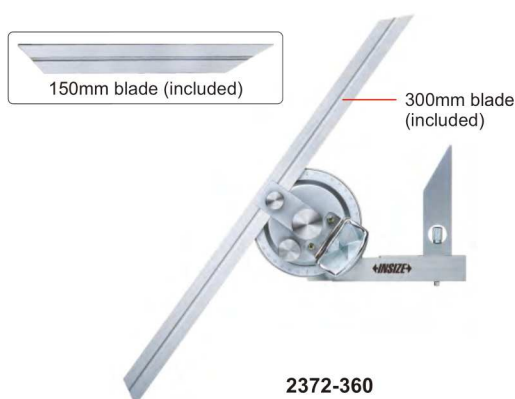


2372-CLAMP

clamp for height gages (optional)

Unit: mm

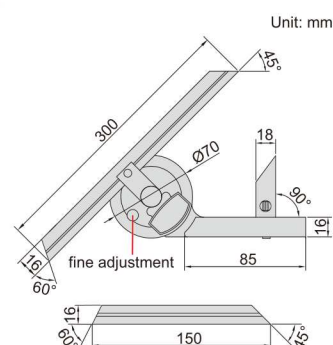
26  
9.5



2372-360

150mm blade (included)

300mm blade (included)



Unit: mm

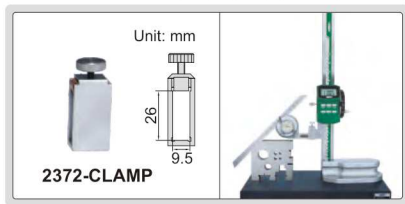
- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code 2372-CLAMP), suitable for height gages 1156, 1351 and 1250

Code	Range	Graduation	Accuracy
2372-360	0-360°	5'	±5'



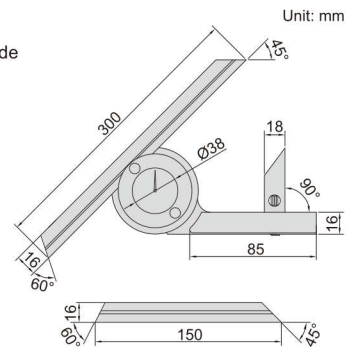
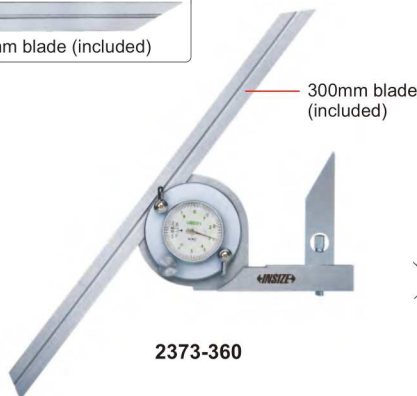
## DIAL PROTRACTOR

clamp for height gages (optional)



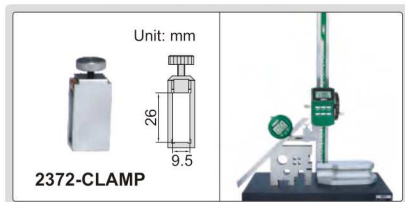
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

Code	Range	Graduation	Accuracy
<b>2373-360</b>	0-360°	5'	±5'



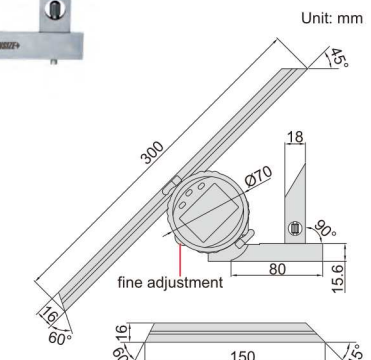
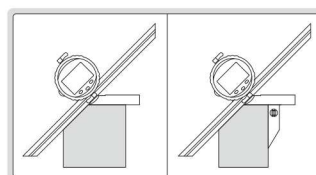
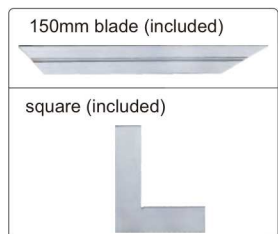
## DIGITAL PROTRACTOR

clamp for height gages (optional)



- Display in degree (for example 32.655°) and degree/minute/second (for example 32°39'30")
- SET button: preset the reading, change measuring direction
- MODE button: choose 0~90°, 0~180° or 0~360° display
- ZERO/ON/OFF button: zero and power on/off
- Battery CR2032, automatic power off
- Data output
- Supplied with square to set 90°
- Made of stainless steel
- Optional accessory: data output cable (code **7315-50**, **7302-SPC3B**), clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1351** and **1250**

Code	Range	Resolution	Accuracy
<b>2172-360A</b>	0-360°	10"/0.005°	±5'



DATA  
OUTPUT

## CYLINDER SQUARES



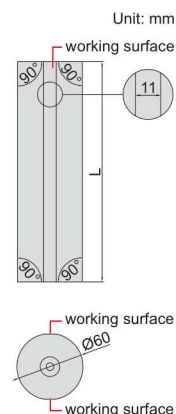
- Made of special alloy steel, hardness HRC58~60
- The handle can be removed

Code	Length (L)	Squareness
<b>4710-200*</b>	200mm	1μm
<b>4710-300*</b>	300mm	2μm

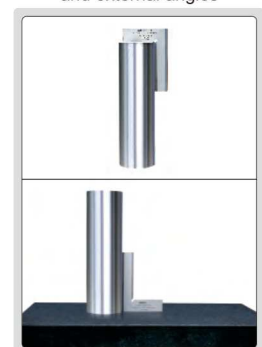
\* Supplied with manufacturer inspection certificate



**4710-200**



inspect 90° internal  
and external angles





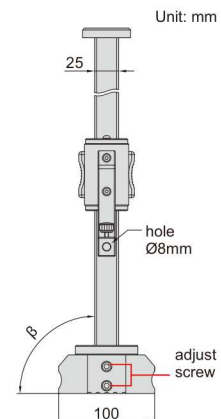
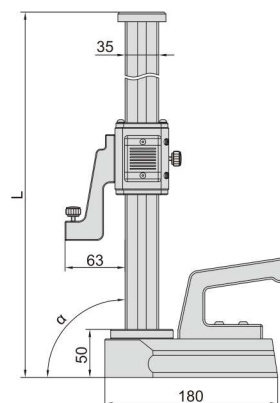
## PERPENDICULARITY TESTERS



dial test indicator  
is optional



4770-300



- Optional accessory:  
dial test indicators (graduation: 1μm or 2μm)

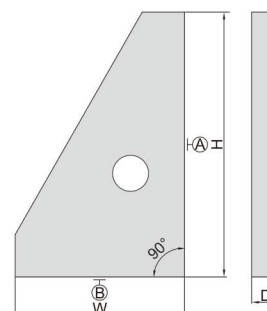
Code	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300	0-300mm	3μm	10μm	460mm
4770-600	0-600mm	5μm	20μm	760mm

10

CUSTOM-MADE  
SUPPLY SPECIAL SIZES ACCORDING  
TO CUSTOMER'S REQUEST



4141-250



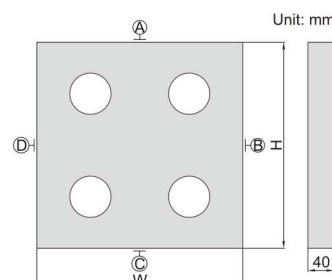
Code	Size (HxW)	Flatness of A	Flatness of B	Squareness of A to B	D
4141-250	250x160mm	1μm	1μm	2μm	25mm
4141-400	400x250mm	1.5μm	1μm	3μm	40mm
4141-630	630x400mm	2μm	1.5μm	4μm	63mm

## GRANITE SQUARES

CUSTOM-MADE  
SUPPLY SPECIAL SIZES ACCORDING  
TO CUSTOMER'S REQUEST



4144-315



Code	Size (HxW)	Flatness of A, B, C and D	Squareness and parallelism between A, B, C and D
4144-315	315x315mm	1.1μm	2.6μm

## GRANITE SQUARE

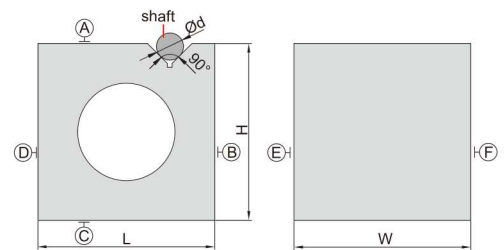


## GRANITE SQUARE WITH V GROOVE

- Parallelism and squareness of A, B, C, D, E and F: 6µm
- Parallelism and squareness of V groove to A, B, C, D, E and F: 6µm



4142-200



Code	Size (LxWxH)	Range of shaft (Ød)
4142-200	200x200x200mm	9~70mm

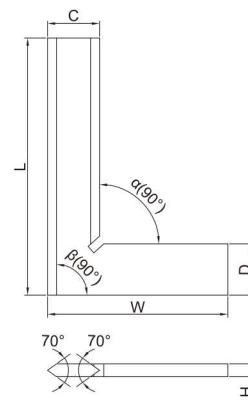
## 90° BEVELED EDGE SQUARES

10

- Satin chrome plating
- Beveled edges for inside and outside measurements
- Made of hardened stainless steel



4790-0100



DIN875 grade 00 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-050	50x40mm	2.4µm	2.5µm	13	13	4
4790-075	75x50mm	2.6µm	2.8µm	15	15	4
4790-0100	100x70mm	2.8µm	3.0µm	20	20	5
4790-0150	150x100mm	3.2µm	3.5µm	30	30	6
4790-0200	200x130mm	3.7µm	4.0µm	34	34	7
4790-0250	250x165mm	4.2µm	4.5µm	35	35	7
4790-0300	300x200mm	4.6µm	5.0µm	40	40	8

DIN875 grade 0 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-500	50x40mm	6µm	6µm	13	13	4
4790-750	75x50mm	6µm	7µm	15	15	4
4790-1000	100x70mm	7µm	7µm	20	20	5
4790-1500	150x100mm	7µm	8µm	30	30	6
4790-2000	200x130mm	8µm	9µm	34	34	7
4790-2500	250x165mm	9µm	10µm	35	35	7
4790-3000	300x200mm	10µm	11µm	40	40	8

## 90° TOOL MAKER SQUARES

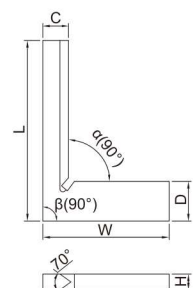
- DIN875 grade 00
- Beveled edge for inside measurement
- Made of hardened stainless steel

(mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4794-025	25x20mm	2.2µm	2.3µm	4	6.5	3.5
4794-040	40x28mm	2.3µm	2.4µm	5.5	8.5	3.5



4794-040





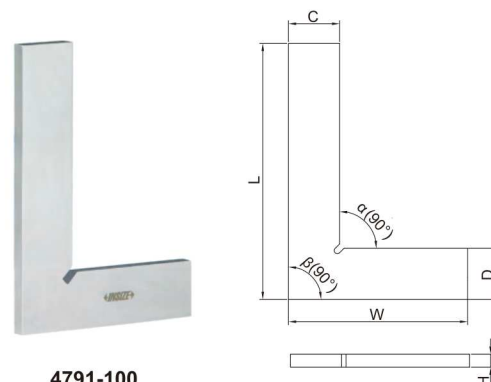
## 90° FLAT EDGE SQUARES

### DIN875 grade 0 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4791-50	50x40mm	6 $\mu$ m	6 $\mu$ m	15	15	4
4791-75	75x50mm	6 $\mu$ m	7 $\mu$ m	15	15	4
4791-100	100x70mm	7 $\mu$ m	7 $\mu$ m	20	20	5
4791-150	150x100mm	7 $\mu$ m	8 $\mu$ m	30	30	6
4791-200	200x130mm	8 $\mu$ m	9 $\mu$ m	30	30	7
4791-250	250x165mm	9 $\mu$ m	10 $\mu$ m	35	35	7
4791-300	300x200mm	10 $\mu$ m	11 $\mu$ m	40	40	8

### DIN875 grade 1 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4791-501	50x40mm	12 $\mu$ m	13 $\mu$ m	15	15	4
4791-751	75x50mm	13 $\mu$ m	14 $\mu$ m	15	15	4
4791-1001	100x70mm	14 $\mu$ m	15 $\mu$ m	20	20	5
4791-1501	150x100mm	16 $\mu$ m	18 $\mu$ m	30	30	6
4791-2001	200x130mm	19 $\mu$ m	20 $\mu$ m	30	30	6



4791-100

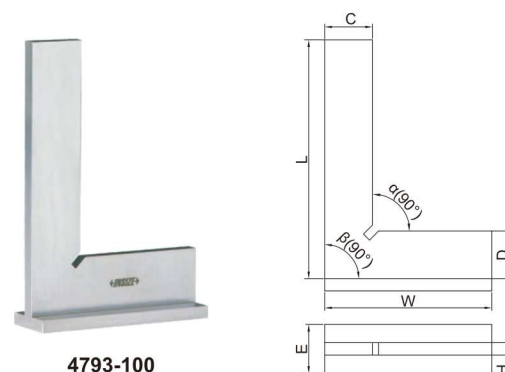
- Made of hardened stainless steel

10

## 90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4793-50	50x40mm	6 $\mu$ m	6 $\mu$ m	13	13	4	13
4793-75	75x50mm	6 $\mu$ m	7 $\mu$ m	15	15	4	15
4793-100	100x70mm	7 $\mu$ m	7 $\mu$ m	20	20	5	20
4793-150	150x100mm	7 $\mu$ m	8 $\mu$ m	30	30	6	30
4793-200	200x130mm	8 $\mu$ m	9 $\mu$ m	30	30	7	30
4793-250	250x165mm	9 $\mu$ m	10 $\mu$ m	35	35	7	35
4793-300	300x200mm	10 $\mu$ m	11 $\mu$ m	40	40	8	40

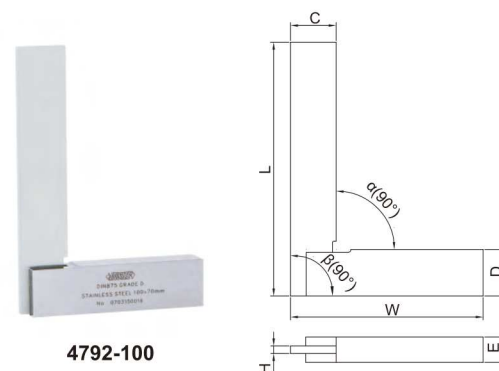


4793-100

## 90° FLAT EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Made of hardened stainless steel

Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4792-50	50x40mm	6 $\mu$ m	6 $\mu$ m	12	12	3	10
4792-75	75x50mm	6 $\mu$ m	7 $\mu$ m	14	14	3	10
4792-100	100x70mm	7 $\mu$ m	7 $\mu$ m	18	18	3	10
4792-150	150x100mm	8 $\mu$ m	8 $\mu$ m	22	22	4	12
4792-200	200x130mm	9 $\mu$ m	9 $\mu$ m	25	25	4	12



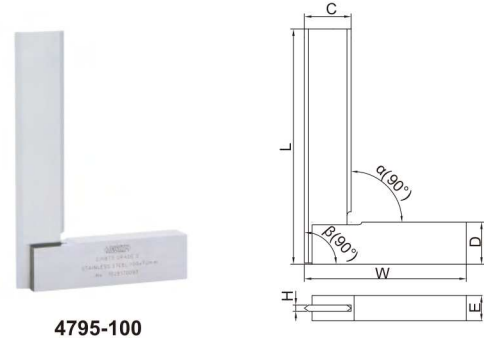
4792-100



## 90° BEVELED EDGE SQUARES WITH WIDE BASE

- DIN875 grade 0
- Beveled edges for inside and outside measurements
- Made of hardened stainless steel

Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4795-50	50x40mm	6 $\mu$ m	6 $\mu$ m	12	12	3	10
4795-75	75x50mm	6 $\mu$ m	7 $\mu$ m	14	14	3	10
4795-100	100x70mm	7 $\mu$ m	7 $\mu$ m	18	18	3	10
4795-150	150x100mm	8 $\mu$ m	8 $\mu$ m	22	22	4	12
4795-200	200x130mm	9 $\mu$ m	9 $\mu$ m	25	25	4	12



4795-100

## MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

ATTENTION: LOW ACCURACY

- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4707-50	50x40mm	24 $\mu$ m	25 $\mu$ m	16	12	3	9
4707-75	75x50mm	26 $\mu$ m	28 $\mu$ m	16	16	3	9
4707-100	100x70mm	28 $\mu$ m	30 $\mu$ m	19	19	3	12
4707-150	150x100mm	33 $\mu$ m	35 $\mu$ m	25	25	3	16
4707-200	200x130mm	37 $\mu$ m	40 $\mu$ m	30	32	4	16
4707-250	250x165mm	42 $\mu$ m	45 $\mu$ m	30	32	4	19
4707-300	300x200mm	47 $\mu$ m	50 $\mu$ m	32	32	4	19
4707-400	400x250mm	56 $\mu$ m	60 $\mu$ m	38	38	5	22
4707-500	500x300mm	65 $\mu$ m	70 $\mu$ m	45	50	6	25
4707-600	600x350mm	75 $\mu$ m	80 $\mu$ m	50	50	6	30
4707-750	750x400mm	90 $\mu$ m	95 $\mu$ m	55	55	6	50
4707-900	900x500mm	103 $\mu$ m	110 $\mu$ m	65	75	9	50
4707-1000	1000x550mm	113 $\mu$ m	120 $\mu$ m	65	75	9	50



4707-100

## MACHINIST SQUARES (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

ATTENTION: LOW ACCURACY

- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend

Code	Size (LxW)	Squareness		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4796-50	50x30mm	24 $\mu$ m	25 $\mu$ m	12	12	3
4796-75	75x50mm	26 $\mu$ m	28 $\mu$ m	16	16	3
4796-100	100x70mm	28 $\mu$ m	30 $\mu$ m	19	19	5
4796-125	125x80mm	30 $\mu$ m	33 $\mu$ m	22	22	5
4796-150	150x100mm	33 $\mu$ m	35 $\mu$ m	25	25	6
4796-200	200x130mm	38 $\mu$ m	40 $\mu$ m	25	25	6
4796-250	250x165mm	43 $\mu$ m	45 $\mu$ m	25	25	6
4796-300	300x200mm	47 $\mu$ m	50 $\mu$ m	30	30	6
4796-350	350x200mm	51 $\mu$ m	55 $\mu$ m	38	38	6
4796-400	400x200mm	56 $\mu$ m	60 $\mu$ m	38	38	9
4796-450	450x250mm	58 $\mu$ m	65 $\mu$ m	38	38	9
4796-500	500x300mm	69 $\mu$ m	70 $\mu$ m	38	38	9



4796-150



## MACHINIST SQUARES WITH WIDE BASE AND SCALE (ECONOMIC TYPE)

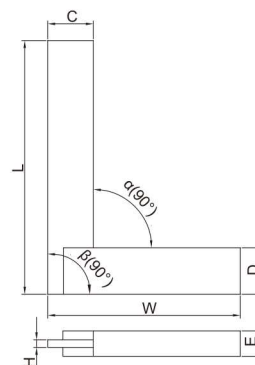
ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

ATTENTION: LOW ACCURACY

- DIN875 grade 2
- Made of carbon steel, no anti-rust treatment, not hardend



4711-100



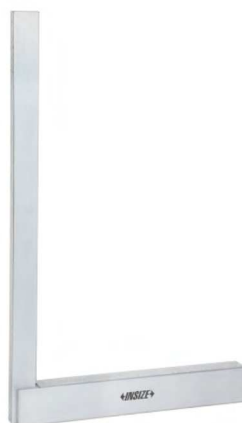
Code	Size (LxW)	Squareness		C	D	H	E
		Inside (α)	Outside (β)				
4711-50	50×30mm	24μm	25μm	16mm	12mm	2.5mm	9mm
4711-75	75×50mm	26μm	28μm	16mm	16mm	2.5mm	9mm
4711-100	100×70mm	28μm	30μm	19mm	19mm	3mm	12mm
4711-150	150×100mm	33μm	35μm	25mm	25mm	3mm	16mm
4711-200	200×130mm	37μm	40μm	30mm	32mm	3mm	16mm
4711-250	250×165mm	42μm	45μm	30mm	32mm	3mm	19mm
4711-300	300×200mm	47μm	50μm	32mm	32mm	3mm	19mm
4711-400	400×200mm	56μm	60μm	38mm	38mm	4.5mm	22mm
4711-500	500×300mm	65μm	70μm	44mm	50mm	6mm	25mm
4711-600	600×350mm	75μm	80μm	50mm	50mm	6mm	30mm
4711-750	750×400mm	90μm	95μm	55mm	55mm	6mm	50mm

10

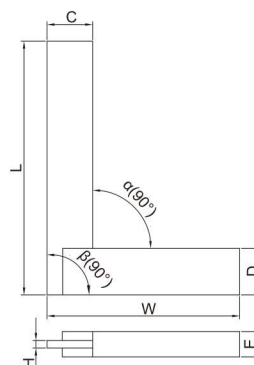
ATTENTION: LOW ACCURACY

## MAGNALIUM 90° FLAT EDGE SQUARES WITH WIDE BASE

- Made of magnalium, light weight, non-deform, no rusty



4705-630



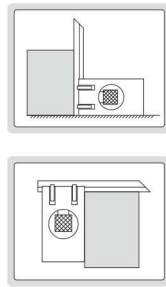
Code	Size (LxW)	Squareness		C	D	H	E	Weight
		Inside (α)	Outside (β)					
4705-630	630×400mm	107μm	113μm	40mm	60mm	18mm	40mm	5kg
4705-800	800×500mm	123μm	130μm	50mm	70mm	25mm	50mm	7kg
4705-1000	1000×630mm	143μm	150μm	50mm	70mm	25mm	50mm	9kg
4705-1250	1250×800mm	168μm	175μm	50mm	70mm	25mm	50mm	11kg
4705-1600	1600×1000mm	203μm	210μm	50mm	70mm	25mm	50mm	13kg
4705-2000	2000×1250mm	243μm	250μm	50mm	70mm	25mm	50mm	15kg
4705-2600	2600×1500mm	303μm	310μm	50mm	70mm	25mm	50mm	20kg



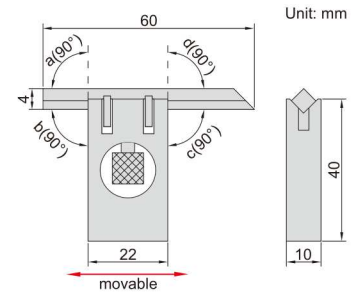
## ADJUSTABLE SQUARE

- The straight edge can move and can be locked by the clamping screw
- Made of hardened stainless steel

Code	Squareness (a, b, c, d)
4701-1	7μm



4701-1



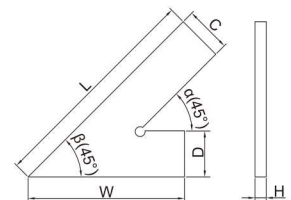
## 45° SQUARES

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4745-1120	120x80mm	29μm	32μm	20	20	5
4745-1150	150x100mm	32μm	35μm	20	20	5
4745-1200	200x130mm	36μm	40μm	25	25	5



4745-1120



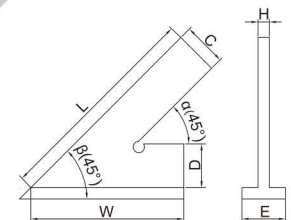
## 45° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4747-120	120x80mm	29μm	33μm	20	20	5	20
4747-150	150x100mm	32μm	36μm	20	20	5	20
4747-200	200x130mm	36μm	41μm	25	25	5	25



4747-120



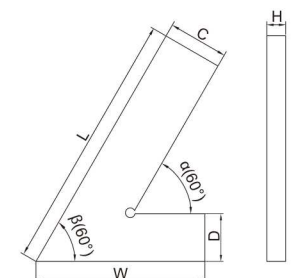
## 60° SQUARES

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4760-1120	120x80mm	30μm	32μm	20	20	5
4760-1150	150x100mm	32μm	35μm	20	20	5
4760-1200	200x130mm	37μm	40μm	25	25	5



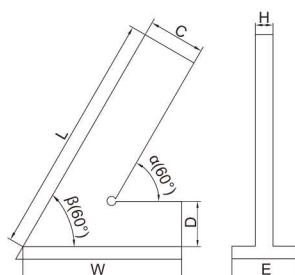
4760-1120





## 60° SQUARES WITH WIDE BASE

- Made of hardened stainless steel



(mm)

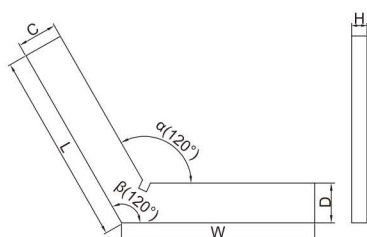
Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4762-120	120x80mm	30μm	33μm	20	20	5	20
4762-150	150x100mm	33μm	36μm	20	20	5	20
4762-200	200x130mm	37μm	41μm	25	25	5	25



4762-120

## 120° SQUARES

10



(mm)

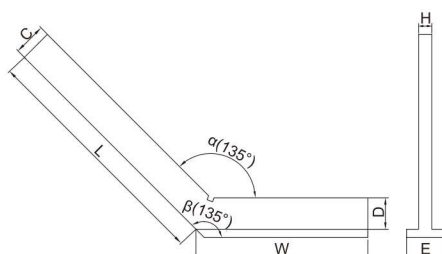
Code	Size (LxW)	Accuracy		C	D	H
		Inside (α)	Outside (β)			
4706-150	50x50mm	24μm	25μm	15	15	5
4706-175	75x75mm	26μm	28μm	20	20	5
4706-1100	100x100mm	29μm	30μm	20	20	5
4706-1150	150x150mm	34μm	35μm	25	25	5
4706-1200	200x200mm	38μm	40μm	30	30	7



4706-1100

- Made of hardened stainless steel

## 135° SQUARES WITH WIDE BASE



(mm)

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside (α)	Outside (β)				
4754-3120	120x80mm	31μm	33μm	20	20	5	20
4754-3150	150x100mm	34μm	36μm	20	20	5	20
4754-3200	200x130mm	39μm	41μm	30	30	7	30

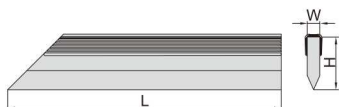


4754-3120

- Made of hardened stainless steel



## STRAIGHT EDGES



4700-100

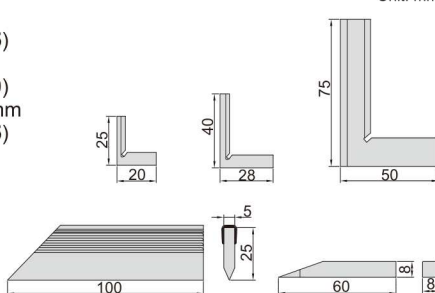
- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating

Code	Size (L)	Straightness	W	H
4700-50	50mm	2.2μm	5mm	20mm
4700-75	75mm	2.3μm	5mm	25mm
4700-100	100mm	2.4μm	5mm	25mm
4700-125	125mm	2.5μm	6mm	30mm
4700-150	150mm	2.6μm	6mm	30mm
4700-200	200mm	2.8μm	6mm	30mm
4700-250	250mm	3.0μm	8mm	40mm
4700-300	300mm	3.2μm	8mm	40mm
4700-400	400mm	3.6μm	10mm	50mm
4700-500	500mm	4.0μm	10mm	50mm

## SQUARE SET

- Includes:
  - 90° tool maker square 25x20mm DIN875 grade 00 (code **4794-025**)
  - 90° tool maker square 40x28mm DIN875 grade 00 (code **4794-040**)
  - 90° beveled edge square 75x50mm DIN875 grade 00 (code **4790-075**)
  - straight edge 100mm DIN874 (code **4700-100**)
  - scriber
- Made of hardened stainless steel

Unit: mm

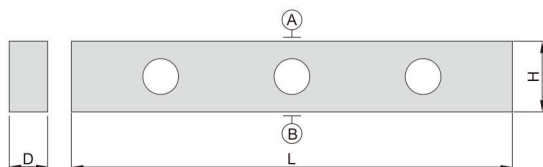


4702-1

Code

4702-1

## GRANITE STRAIGHT EDGES

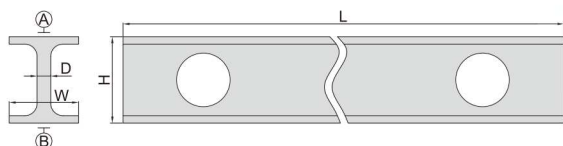


4147-500A

Code	Length (L)	Flatness of A and B	Parallelism between A and B	D	H
4147-500A	500mm	2.1μm	3.2μm	50mm	80mm
4147-1000A	1000mm	3.0μm	4.5μm	60mm	120mm

## MAGNALIUM STRAIGHT EDGES

- Made of magnalium, light weight, non-deform, no rusty



4180-1500

LIGHT WEIGHT

Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D	Weight
4180-500	500mm	3μm	4μm	60mm	30mm	5mm	1kg
4180-1000	1000mm	5μm	8μm	60mm	30mm	5mm	1.5kg
4180-1500	1500mm	15μm	22μm	100mm	40mm	7mm	4.5kg
4180-2000	2000mm	18μm	27μm	100mm	40mm	7mm	6kg
4180-2500	2500mm	22μm	33μm	100mm	40mm	7mm	7.5kg
4180-3000	3000mm	48μm	72μm	150mm	80mm	8mm	21kg

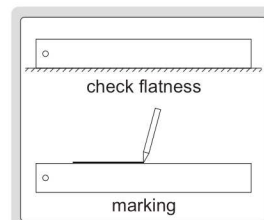
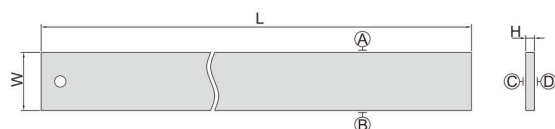


## PRECISION STRAIGHT EDGES



7117-300

- Check flatness and for marking
- Made of tool steel



Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7117-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7117-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7117-900	914mm	0.007mm	0.06mm	64mm	9.5mm

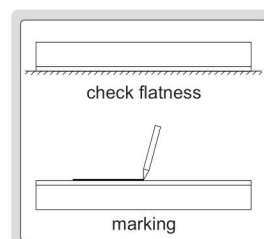
## PRECISION STRAIGHT EDGES WITH BEVELED EDGE

10



7118-300

- Check flatness and for marking
- Made of tool steel



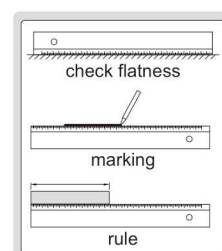
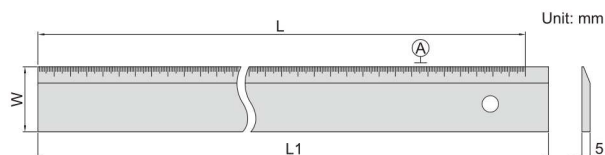
Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7118-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7118-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7118-900	914mm	0.007mm	0.06mm	64mm	9.5mm

## STRAIGHT EDGES



7111-300A

- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated



Code	Range (L)	Straightness of A	L1	W
7111-300A	300mm	0.02mm	310mm	40mm
7111-500A	500mm	0.03mm	510mm	40mm
7111-1000A	1000mm	0.04mm	1010mm	50mm



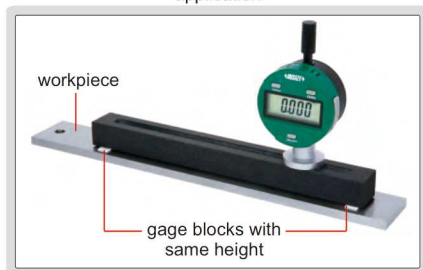
## STRAIGHTNESS/FLATNESS GAGE

GRANITE HODLER CAN BE CUSTOMIZED  
ACCORDING TO WORKPIECES



VIDEO

application



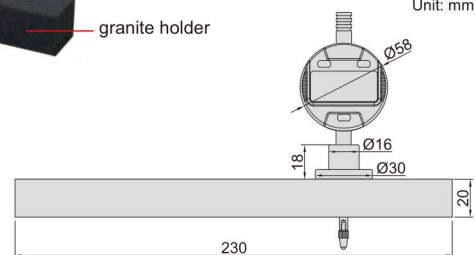
2144-200

digital indicator  
(code 2112-101F)

stainless steel base

granite holder

Unit: mm



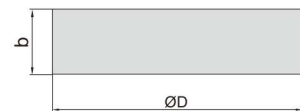
Code	Range	Digital indicator resolution	Straightness measurement accuracy	Parallelism of top and bottom surfaces of granite holder	Flatness of top and bottom surfaces of granite holder
2144-200	200mm	0.001mm/0.00005"	3µm	2µm	1.5µm

## OPTICAL FLATS

- Check flatness
- Single working face, the arrow indicates the working face



4191-45B



Code	b	ØD	Flatness
4191-45A	12mm	45mm	0.03µm
4191-60A	15mm	60mm	0.03µm

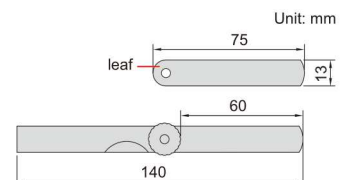
Code	b	ØD	Flatness
4191-45B	12mm	45mm	0.1µm
4191-60B	15mm	60mm	0.1µm

## FEELER GAGE

- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy:  $\pm(3+T/80)$  µm, 'T' is the thickness of leaves in µm



4601-25



Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4601-25	0.04-1.00mm	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, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	25

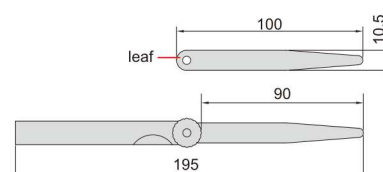


## FEELER GAGES



**4602-20**

Unit: mm



- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy:  $\pm(3+T/80)$   $\mu\text{m}$ ,  
'T' is the thickness of leaves in  $\mu\text{m}$

Code	Range	Thickness of leaves included (mm)	Quantity of leaves
4602-13A	0.03-0.50mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.30, 0.40, 0.50	13
4602-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13
4602-17	0.02-1.00mm	0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.75, 1.00	17
4602-20	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20
4602-28	0.05-1.00mm	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, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	28
4602-32	0.03-1.00mm	0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.10, 0.13, 0.15, 0.18, 0.20, 0.23, 0.25, 0.28, 0.30, 0.33, 0.35, 0.38, 0.40, 0.45, 0.50, 0.55, 0.60, 0.63, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 1.00	32

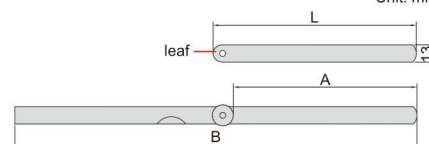
11

## LONG FEELER GAGES



**4605-20**

Unit: mm



- Made of hardened alloy steel
- Meet DIN2275/grade TC1
- Accuracy:  $\pm(3+T/80)$   $\mu\text{m}$ ,  
'T' is the thickness of leaves in  $\mu\text{m}$

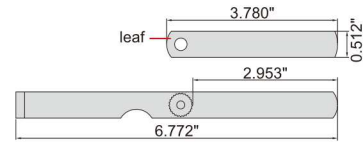
Code	Range	Thickness of leaves included (mm)	Quantity of leaves	L	A	B
4605-13	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.40, 0.50, 0.60, 0.70, 0.80, 0.90, 1.00	13	150mm	135mm	295mm
4605-131	0.05-1.00mm		13	200mm	185mm	395mm
4605-132	0.05-1.00mm		13	300mm	285mm	590mm
4605-20	0.05-1.00mm	0.05, 0.10, 0.15, 0.20, 0.25, 0.30, 0.35, 0.40, 0.45, 0.50, 0.55, 0.60, 0.65, 0.70, 0.75, 0.80, 0.85, 0.90, 0.95, 1.00	20	150mm	135mm	295mm
4605-201	0.05-1.00mm		20	200mm	185mm	395mm
4605-202	0.05-1.00mm		20	300mm	285mm	590mm



## INCH FEELER GAGE



4608-31



- 0.010" is made of brass, others are made of hardened alloy steel
- Each blade is marked with inch/metric size

Thickness of leaves included	Accuracy
0.010" (brass)	±0.00039"
0.0015", 0.002"	±0.0002"
0.0025", 0.003", 0.004", 0.005", 0.006", 0.007"	±0.00028"
0.008", 0.009"	±0.00035"
0.010", 0.011"	±0.00039"
0.012", 0.013"	±0.00047"
0.014", 0.015"	±0.00051"

Thickness of leaves included	Accuracy
0.016", 0.017"	±0.00055"
0.018", 0.019"	±0.00059"
0.020", 0.021"	±0.00067"
0.022", 0.023"	±0.00071"
0.024", 0.025", 0.026"	±0.00075"
0.028"	±0.00091"
0.030"	±0.00094"
0.032", 0.035"	±0.00102"

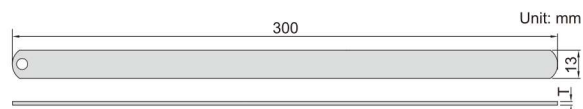
Code	Range	Quantity of Leaves
4608-31	0.0015"~0.035"	32

## FEELER GAGE STOCKS



4622-10

- Used as shims to accurately set spacing
- Made of hardened alloy steel
- Length 300mm
- Width 13mm
- 10 pcs per package



Code	Thickness (T)	Accuracy
4622-02	0.02mm	±3μm
4622-03	0.03mm	±3μm
4622-04	0.04mm	±3μm
4622-05	0.05mm	±3μm
4622-06	0.06mm	±3μm
4622-07	0.07mm	±4μm
4622-08	0.08mm	±4μm
4622-09	0.09mm	±4μm
4622-10	0.10mm	±4μm
4622-12	0.12mm	±5μm

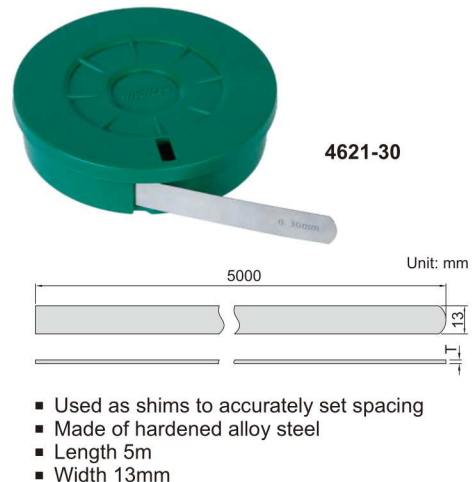
Code	Thickness (T)	Accuracy
4622-15	0.15mm	±5μm
4622-18	0.18mm	±6μm
4622-20	0.20mm	±6μm
4622-25	0.25mm	±6μm
4622-30	0.30mm	±7μm
4622-35	0.35mm	±7μm
4622-40	0.40mm	±8μm
4622-45	0.45mm	±8μm
4622-50	0.50mm	±9μm
4622-55	0.55mm	±9μm

Code	Thickness (T)	Accuracy
4622-60	0.60mm	±9μm
4622-65	0.65mm	±9μm
4622-70	0.70mm	±12μm
4622-75	0.75mm	±12μm
4622-80	0.80mm	±13μm
4622-85	0.85mm	±13μm
4622-90	0.90mm	±14μm
4622-95	0.95mm	±14μm
4622-100	1.00mm	±16μm



## FEELER GAGE TAPES

Code	Thickness (T)	Accuracy	Code	Thickness (T)	Accuracy
4621-02	0.02mm	±4µm	4621-30	0.30mm	±9µm
4621-03	0.03mm	±4µm	4621-35	0.35mm	±11µm
4621-04	0.04mm	±4µm	4621-40	0.40mm	±12µm
4621-05	0.05mm	±4µm	4621-45	0.45mm	±12µm
4621-06	0.06mm	±4µm	4621-50	0.50mm	±14µm
4621-07	0.07mm	±5µm	4621-55	0.55mm	±14µm
4621-08	0.08mm	±5µm	4621-60	0.60mm	±14µm
4621-09	0.09mm	±5µm	4621-65	0.65mm	±14µm
4621-10	0.10mm	±5µm	4621-70	0.70mm	±17µm
4621-12	0.12mm	±5µm	4621-75	0.75mm	±17µm
4621-15	0.15mm	±6µm	4621-80	0.80mm	±19µm
4621-18	0.18mm	±7µm	4621-85	0.85mm	±19µm
4621-20	0.20mm	±8µm	4621-90	0.90mm	±22µm
4621-25	0.25mm	±9µm	4621-95	0.95mm	±22µm
			4621-100	1.00mm	±24µm

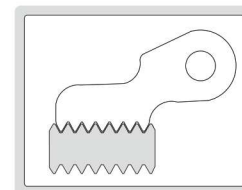


## PITCH GAGES

- Identify the pitch of screw thread
- Made of medium carbon steel



4820-122



### Metric 60° screw

Code	Range	Pitch of leaves included (mm)	Quantity of leaves
4820-122	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	22
4820-124	0.25-7.0mm	0.25, 0.3, 0.35, 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	24
4820-1241	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6	24

### Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-230	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30

### Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-330	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	30
4820-328	4-62TPI	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, 36, 40, 48, 60, 62TPI	28

### Metric 60° and Whitworth 55° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-452	0.25-6.0mm	0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm	52
	4-62TPI	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, 36, 40, 48, 60, 62TPI	
4820-450	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	50
	4-62TPI	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, 36, 40, 48, 60, 62TPI	

### Metric 60° and Unified 60° screw

Code	Range	Pitch of leaves included	Quantity of leaves
4820-552	0.4-7.0mm	0.4, 0.5, 0.6, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	52
	4-42TPI	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42TPI	

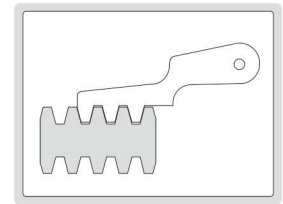


## PITCH GAGES

- Check the pitch of screw thread
- Accuracy:  $\pm 0.07\text{mm}$
- Made of medium carbon steel



4824-12



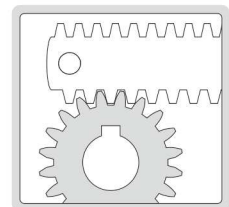
Code	Range	Thread type	Pitch of leaves included	Quantity of leaves
4824-12	2-20mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20mm	12
4824-16	1-12TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 3-1/2, 4, 5, 6, 7, 8, 9, 10, 12TPI	16

## GEAR TOOTH PITCH GAGES

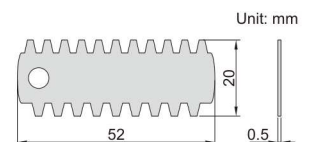
- Check the module pitch of gear tooth
- Accuracy:  $\pm 0.05\text{mm}$
- Made of hardened stainless steel



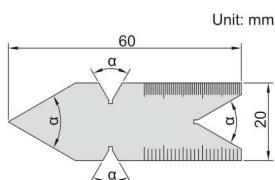
4860-245



Code	Range	Pressure angle	Quantity of leaves
4860-145	0.35-4.5mm	14.5°	15
4860-245	0.35-4.5mm	20°	15
4860-112	5-12mm	14.5°	8
4860-212	5-12mm	20°	8

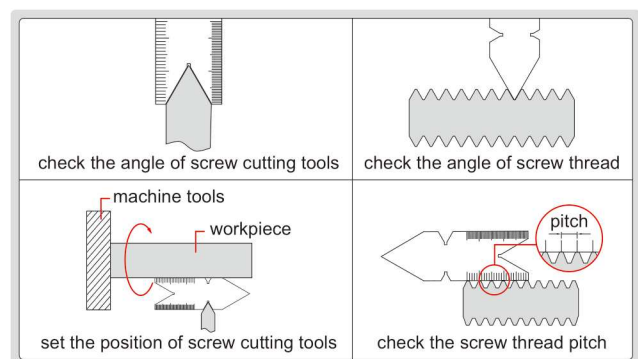


## CENTER GAGES



4810-602

- To check and set screw cutting tools, and check the angle and pitch of screw thread
- Angle accuracy:  $\pm 30\text{min}$ .
- Made of stainless steel



Code	Thread type	Angle ( $\alpha$ )	Graduation
4810-601	METRIC 60°	60°	0.5mm and 1mm
4810-602	UNIFIED 60°	60°	14ths and 20ths on front side, 24ths and 32ths on back side
4810-55	WHITWORTH 55°	55°	14ths and 20ths on front side, 24ths and 32ths on back side



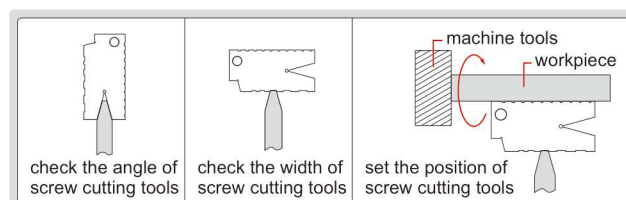
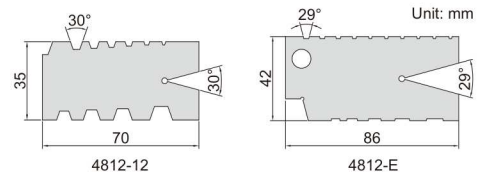
## THREAD GAGES



4812-E

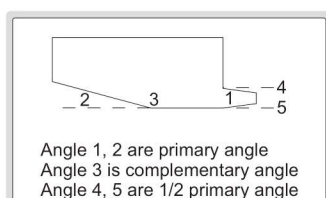
- To check and set screw cutting tools
- Made of medium carbon steel

Code	Range	Thread type	Pitch
4812-12	2-12mm	Tr 30°	2, 3, 4, 5, 6, 7, 8, 9, 10, 12mm
4812-E	1-10TPI	ACME 29°	1, 1-1/3, 1-1/2, 1-3/4, 2, 2-1/2, 3, 4, 5, 6, 7, 8, 9, 10TPI

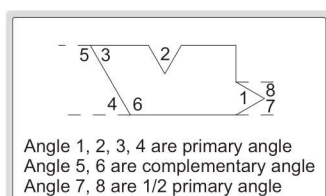


## ANGLE GAGE SET

11



type A



type B



4807

- Each blade checks primary, 1/2 primary and complementary angles
- Made of medium carbon steel

Code	Quantity of leaves	Accuracy
4807	18	±10'

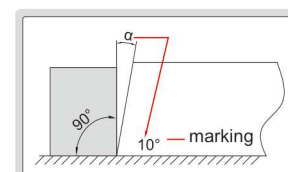
Primary angle	1/2 primary angle	Complementary angle	Type
5°	2°30'	175°	A
10°	5°	170°	A
15°	7°30'	165°	A
20°	10°	160°	B
25°	12°30'	155°	B
30°	15°	150°	B
35°	17°30'	145°	B
40°	20°	140°	B
45°	22°30'	135°	B
50°	25°	130°	B
55°	27°30'	125°	B
60°	30°	120°	B
65°	32°30'	115°	B
70°	35°	110°	B
75°	37°30'	105°	B
80°	40°	100°	B
85°	42°30'	95°	B
90°	45°	90°	B

## ANGLE GAGE

- To check complementary angles
- Made of stainless steel



4806-20



Code	Range (α)	Angle of leaves included	Quantity of leaves	Accuracy
4806-20	1°-45°	1°, 2°, 3°, 4°, 5°, 6°, 7°, 8°, 9°, 10°, 12°, 14°, 16°, 18°, 20°, 25°, 30°, 35°, 40°, 45°	20	±30'

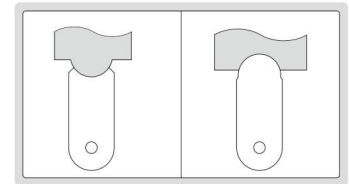


## RADIUS GAGES

- Made of medium carbon steel



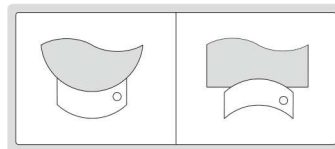
4801-17



Code	Range	Radius of leaves included (mm)	Quantity of leaves (internal + external)
4801-17	1-7mm	1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7	17+17
4801-16	7.5-15mm	7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15	16+16
4801-15	15.5-25mm	15.5, 16, 16.5, 17, 17.5, 18, 18.5, 19, 19.5, 20, 21, 22, 23, 24, 25	15+15

## RADIUS GAGE

- Made of stainless steel

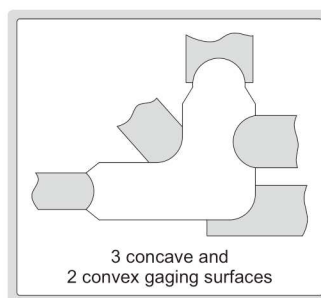


4802-31

Code	Range	Radius of leaves included (mm)	Quantity of leaves
4802-31	25-40mm	25, 25.5, 26, 26.5, 27, 27.5, 28, 28.5, 29, 29.5, 30, 30.5, 31, 31.5, 32, 32.5, 33, 33.5, 34, 34.5, 35, 35.5, 36, 36.5, 37, 37.5, 38, 38.5, 39, 39.5, 40	31 pcs

## RADIUS GAGE SET

- Each piece has 3 concave and 2 convex gauging surfaces
- Supplied with handle
- Made of medium carbon steel

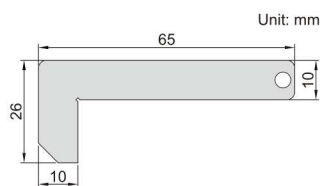


4804-26

Code	Range	Radius of leaves included (mm)	Quantity of leaves
4804-26	0.5-13mm	0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13	26



## CHAMFER GAGE

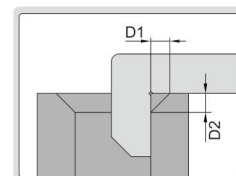
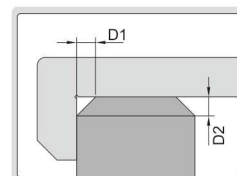


- To measure internal and external chamfers
- Made of stainless steel

Code	Graduation	Accuracy
4844-1	0.5mm	±0.25mm



4844-1



### DATA OUTPUT

- Measure 15°/20°/30°/45°/60° chamfer dimension
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (data output cable code 7315-21, 7302-21, optional)

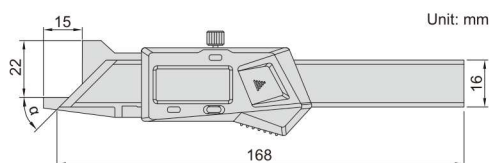
Code	Range	Accuracy	Chamfer (α)
1180-6	0-10mm/0-0.39"	±0.06mm	45°
1180-61	0-10mm/0-0.39"	±0.06mm	15°
1180-62	0-10mm/0-0.39"	±0.06mm	20°
1180-63	0-10mm/0-0.39"	±0.06mm	30°
1180-66	0-10mm/0-0.39"	±0.06mm	60°

Built-in wireless (receiver code 7315-2/3/6/7/8 is required)

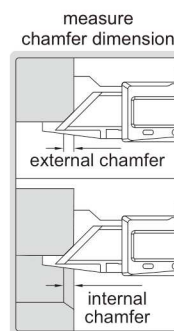
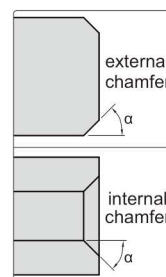
Code	Range	Accuracy	Chamfer (α)
1180-6WL	0-10mm/0-0.39"	±0.06mm	45°
1180-61WL	0-10mm/0-0.39"	±0.06mm	15°
1180-62WL	0-10mm/0-0.39"	±0.06mm	20°
1180-63WL	0-10mm/0-0.39"	±0.06mm	30°
1180-66WL	0-10mm/0-0.39"	±0.06mm	60°



1180-6



Unit: mm

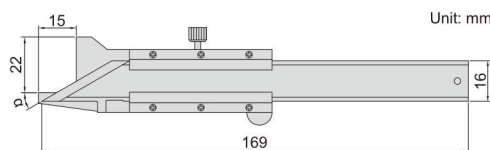


## CHAMFER GAGES

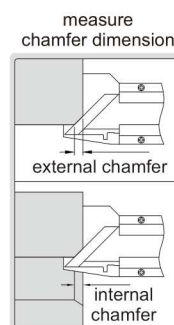
- Measure 30°/45°/60° chamfer dimension
- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface



1267-6



Unit: mm

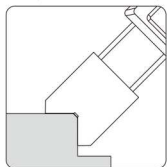


Code	Range	Accuracy	Chamfer (α)
1267-6	0-10mm	±0.06mm	45°
1267-63	0-10mm	±0.06mm	30°
1267-66	0-10mm	±0.06mm	60°



## DIGITAL CHAMFER GAGES

1537-8 can measure small workpieces or workpieces with steps



pin gage (included)



- Measure 45° chamfer length
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Date output
- Made of stainless steel
- Supplied with pin gage for zero setting

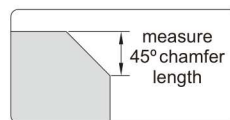
Code	Range	Accuracy
1537-20	0-20mm/0-0.787"	±0.05mm
1537-8	0-8mm/0-0.315"	±0.05mm



1537-20

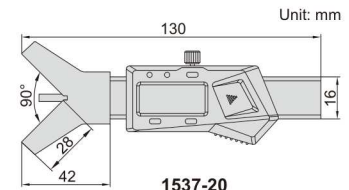


1537-8

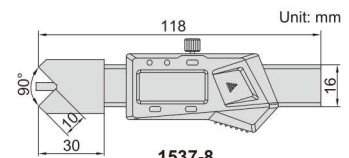


ATTENTION: THE ACTUAL LENGTH IS 1.414 TIMES OF THE READING

ATTENTION: CHAMFER OF HOLES CANNOT BE MEASURED



1537-20



1537-8

11

## CHAMFER HEIGHT GAGE

**INSIZE PLUS**  
MADE IN EUROPE

setting gage (included)

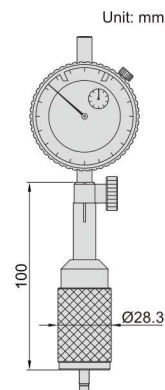


- Measure outside or inside chamfer height
- Suitable for diameter of bores  $\geq 6\text{mm}$ , chamfer angle  $\alpha \geq 30^\circ$
- Setting gage is included

Code	Range (L)	Graduation	Accuracy
2943-1	0.2-5mm	0.01mm	±0.02mm

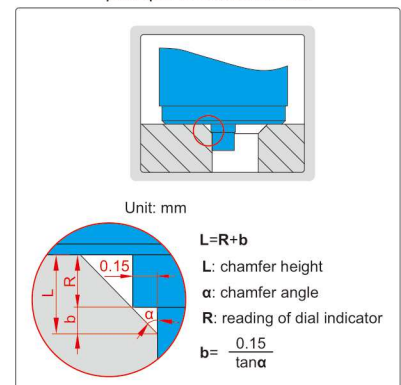


2943-1



Unit: mm

principle of measurement



## DIGITAL CHAMFER HEIGHT GAGE

**INSIZE PLUS**  
MADE IN EUROPE

setting gage (included)

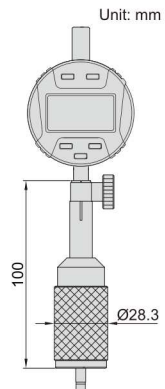


- Measure outside or inside chamfer height
- Suitable for diameter of bores  $\geq 6\text{mm}$ , chamfer angle  $\alpha \geq 30^\circ$
- Resolution: 0.01mm/0.0005"
- Setting gage is included
- Optional accessory: data output cable (code 7315-50M, 7302-40M)

Code	Range (L)	Accuracy
2944-1	0.2-5mm/0.008-0.197"	±0.02mm

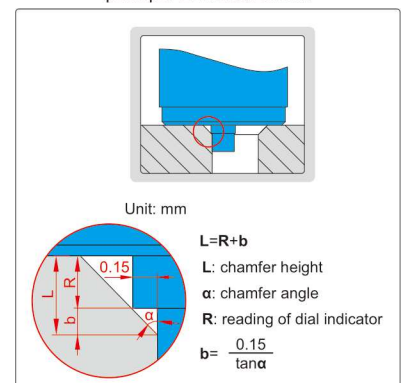


2944-1



Unit: mm

principle of measurement





DATA  
OUTPUT

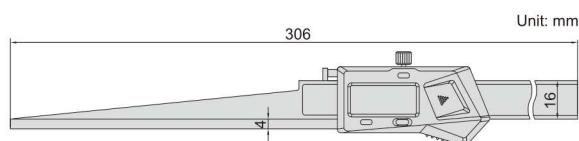
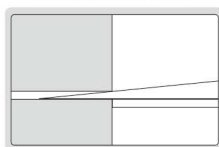
ATTENTION: ACTUAL SLOT  
WIDTH IS 1/10 OF THE READING

## DIGITAL TAPER SLOT GAGES

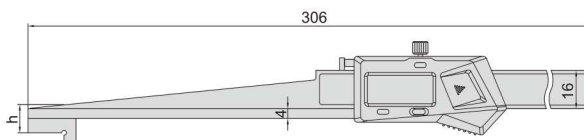


1160-10

measure slot width



0.2-10mm/0.01-0.39"



10-20mm/0.39-0.79" up to 30-40mm/1.18-1.58"

- Measuring opening, slot width
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (data output cable  
code 7315-21, 7302-21, optional)

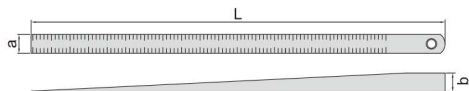
Code	Range	Accuracy	h
1160-10	0.2-10mm/0.01-0.39"	±0.03mm	—
1160-20	10-20mm/0.39-0.79"	±0.05mm	10mm
1160-30	20-30mm/0.79-1.18"	±0.05mm	20mm
1160-40	30-40mm/1.18-1.58"	±0.05mm	30mm

Built-in wireless (receiver code 7315-2/3/6/7/8 is required)

Code	Range	Accuracy	h
1160-10WL	0.2-10mm/0.01-0.39"	±0.03mm	—
1160-20WL	10-20mm/0.39-0.79"	±0.05mm	10mm
1160-30WL	20-30mm/0.79-1.18"	±0.05mm	20mm
1160-40WL	30-40mm/1.18-1.58"	±0.05mm	30mm

11

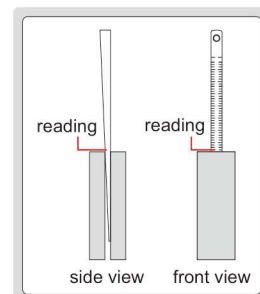
## TAPER SLOT GAGES



4630-1

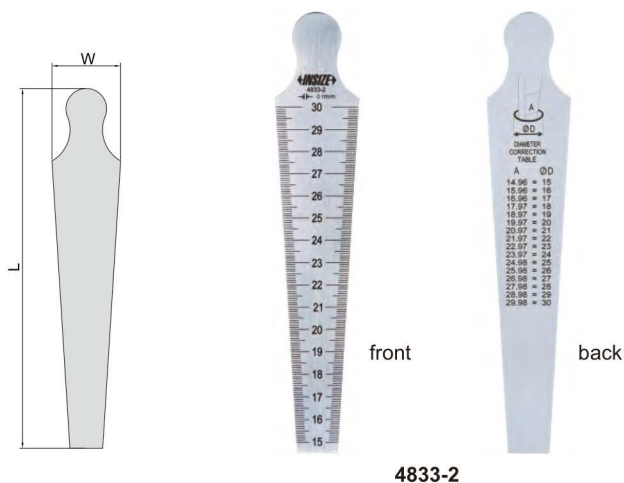
- For quick measurement of slot width
- Satin chrome plated reading surface
- Made of stainless steel

Code	Range	Graduation	Accuracy	L	a	b
4630-3	0.4-6mm	0.05mm	±0.04mm	164mm	12.5mm	6.5mm
4630-1	0.5-10mm	0.05mm	±0.07mm	220mm	10mm	10.5mm
4630-2	0.5-15mm	0.1mm	±0.08mm	184mm	12.5mm	16.5mm



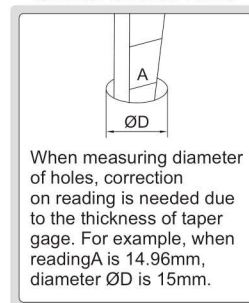


## TAPER GAGES

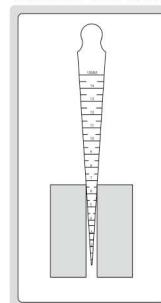


- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back (only for 4833-1, 4833-2)
- Made of stainless steel

measure diameter of hole



measure slot width



(mm)					
Code	Range	Graduation	Accuracy	L	W
4833-1	0.8-15mm	0.1mm	±0.05mm	146	17
4833-2	15-30mm	0.1mm	±0.05mm	159	30.4
4833-3	30-45mm	0.1mm	±0.05mm	166	45.4
4833-4	45-60mm	0.1mm	±0.05mm	170	60.5

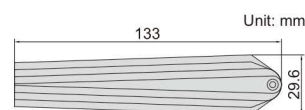
11

## TAPER GAGE SET

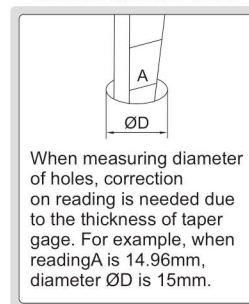


- Include 4 pcs (1~8mm, 8~15mm, 15~22mm, 22~29mm)
- Measure opening, slot width, hole diameter, etc.
- Diameter correction table on the back
- Made of stainless steel

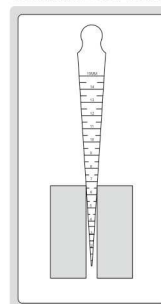
Code	Range	Graduation	Accuracy
4837-1	1-29mm	0.05mm	±0.05mm



measure diameter of hole



measure slot width



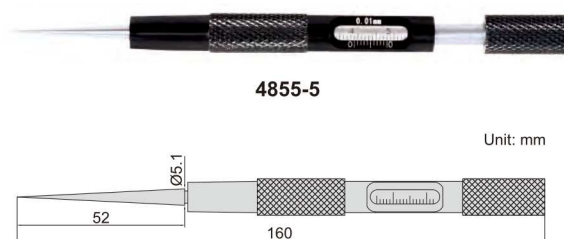
## BORE GAGE

- Quick measurement of small bore diameter
- Hardened working face
- Supplied with protection cap

supplied with protection cap



Code	Range	Graduation	Accuracy
4855-5	0.1-5mm	0.01mm	±0.03mm



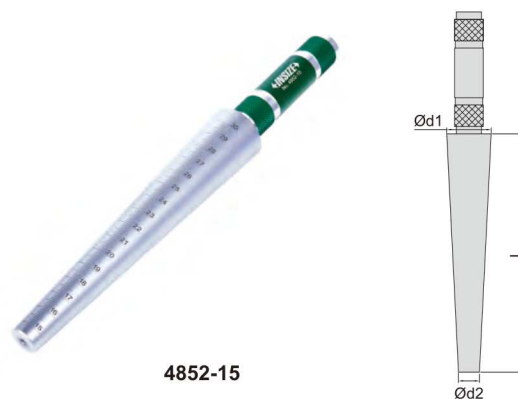


## TAPER BORE GAGES

- Quick measurement of bore diameter
- Hardened steel, HRC50-58
- Satin chrome plated surface
- Aluminium oxidized handle

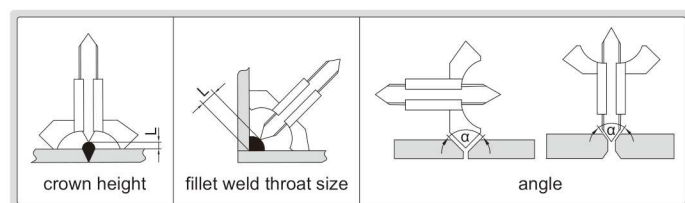
Code	Range	Graduation	Accuracy	L	Ød1	Ød2
4852-1	1-6.5mm	0.1mm	±0.05mm	62.5	7	0.8
4852-3	3-16mm	0.1mm	±0.05mm	143	17	2.8
4852-15	15-30mm	0.1mm	±0.05mm	165	31	14.7
4852-30	30-45mm	0.1mm	±0.05mm	165	46	29.6
4852-45	45-60mm	0.1mm	±0.05mm	167	61	44.3

(mm)



4852-15

## WELDING GAGE

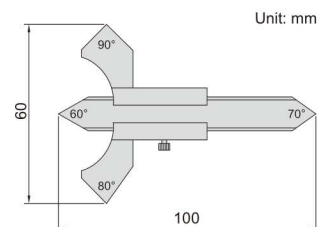


- Made of stainless steel
- Satin chrome plated reading surface

Code	Measurement	Range	Graduation	Accuracy
4830	crown height	0-8mm	0.1mm	±0.1mm
	fillet weld throat size	0-20mm	0.1mm	±0.3mm
	angle	60°, 70°, 80°, 90°	—	±1°



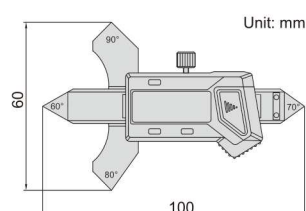
4830



Unit: mm

11

ATTENTION:  
NO DATA OUTPUT



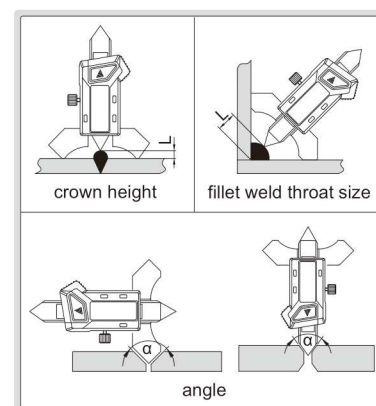
Unit: mm



4831-20A

- Buttons: zero, mm/inch, on/off
- Battery LR44
- Made of stainless steel

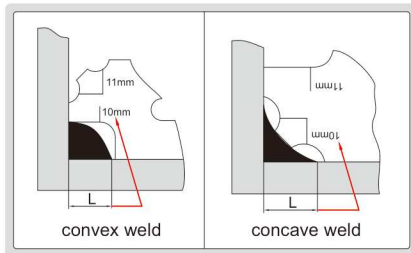
Code	Measurement	Range	Resolution	Accuracy
4831-20A	crown height	0-7mm	0.01mm/0.0005"	±0.03mm
	fillet weld throat size	0-20mm	0.01mm/0.0005"	±0.1mm
	angle	60°, 70°, 80°, 90°	—	±1°



## DIGITAL WELDING GAGE



## FILLET WELDING GAGES



- Measure concave and convex weld sizes
- 7 blades are included
- Made of stainless steel

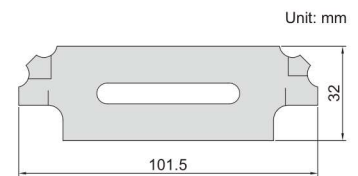


4836-1

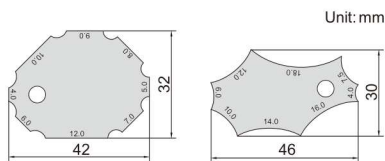


4836-2

Code	Size	Accuracy
4836-1	3mm, 4mm, 5mm, 6mm, 8mm, 9mm, 10mm, 11mm, 12mm, 14mm, 16mm, 19mm, 22mm, 25mm	±0.5mm
4836-2	1/8" (3.2mm), 3/16" (4.8mm), 1/4" (6.4mm), 5/16" (7.9mm), 3/8" (9.5mm), 7/16" (11.1mm), 1/2" (12.7mm), 5/8" (15.9mm), 3/4" (19.1mm), 7/8" (22.2mm), 1" (25.4mm)	±0.02" (0.5mm)

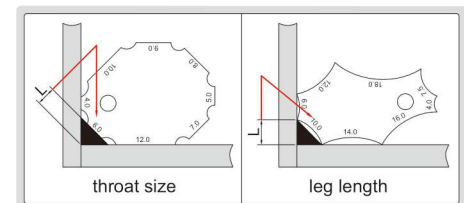


## FILLET WELDING GAGE



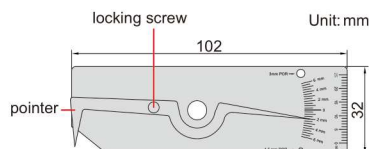
4832-1

- Made of stainless steel
- Sizes marked on both faces



Code	Throat size	Leg length	Accuracy
4832-1	4, 5, 6, 7, 8, 9, 10, 12mm	4, 6, 7.5, 10, 12, 14, 16, 18mm	±0.5mm

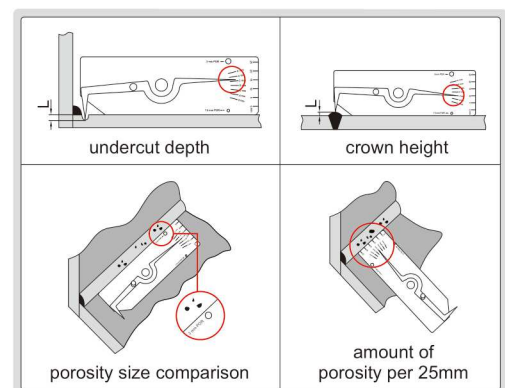
## WELDING GAGE



4834-1

- Pointer can be locked for later reference
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4834-1	undercut depth	0-6mm	0.5mm	±0.5mm
	crown height	0-6mm	0.5mm	±0.5mm
	porosity size comparison	1.5mm, 3mm	—	±0.2mm
	amount of porosity per 25mm	25mm	1mm	—

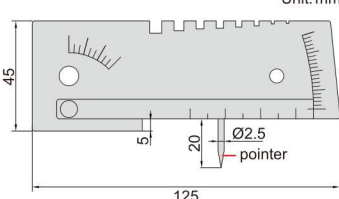




## WELDING GAGE



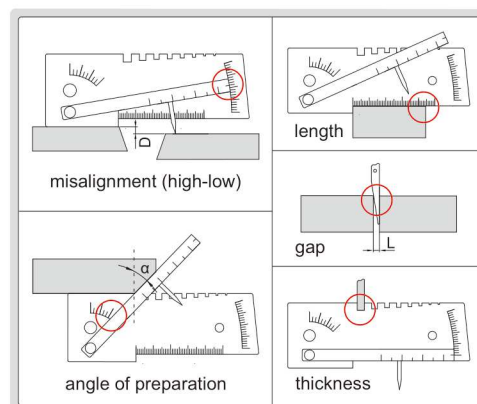
4848-1



Unit: mm

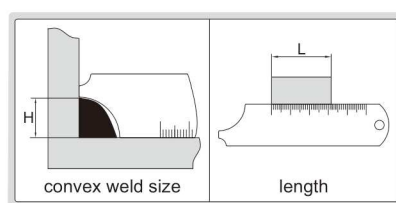
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4848-1	misalignment (high-low)	-5mm~+15mm	1mm	±0.5mm
	angle of preparation	0°-45°	5°	±2.5°
	length	0-50mm	1mm	±0.5mm
	gap	1-4mm	0.5mm	±0.25mm
	thickness	1, 1.2, 2.0, 2.5, 3.0, 3.25, 4.0, 5.0mm	—	±0.1mm



## FILLET WELDING GAGE

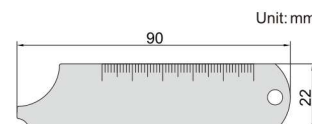
- Measure convex weld sizes
- 3 blades are included
- Made of stainless steel



4847-1

Unit: mm

Code	Measurement	Range	Graduation	Accuracy
4847-1	convex weld size	4, 6, 8, 10, 12, 14mm	—	±0.5mm
	length	0 - 50mm	1mm	±0.5mm



## WELDING GAGE



front

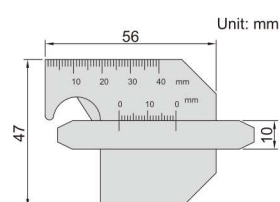


back

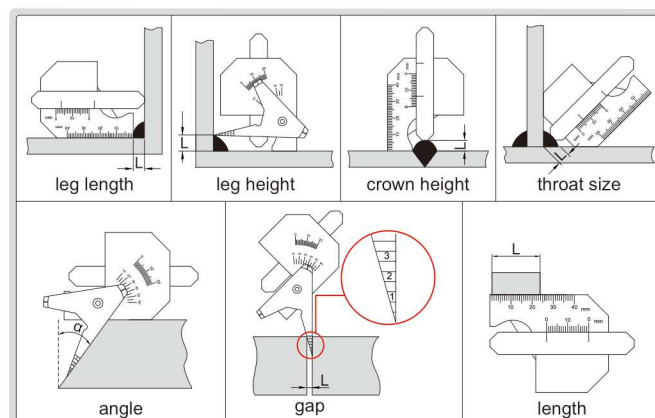
6832-1

- Made of stainless steel
- Satin chrome plated surface

Code	Measurement	Range	Graduation	Accuracy
6832-1	leg length	0-20mm	1mm	±0.3mm
	leg height	0-20mm	1mm	±0.3mm
	crown height	0-20mm	1mm	±0.3mm
	throat size	0-10mm	1mm	±0.3mm
	angle	0°-60°	5°	±1°
	gap	1-3.5mm	0.5mm	±0.2mm
	length	0-40mm	1mm	±0.3mm



Unit: mm





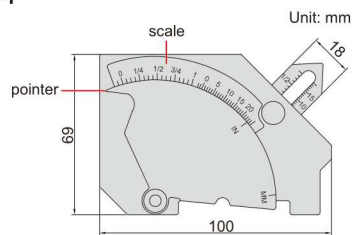
## WELDING GAGE



front

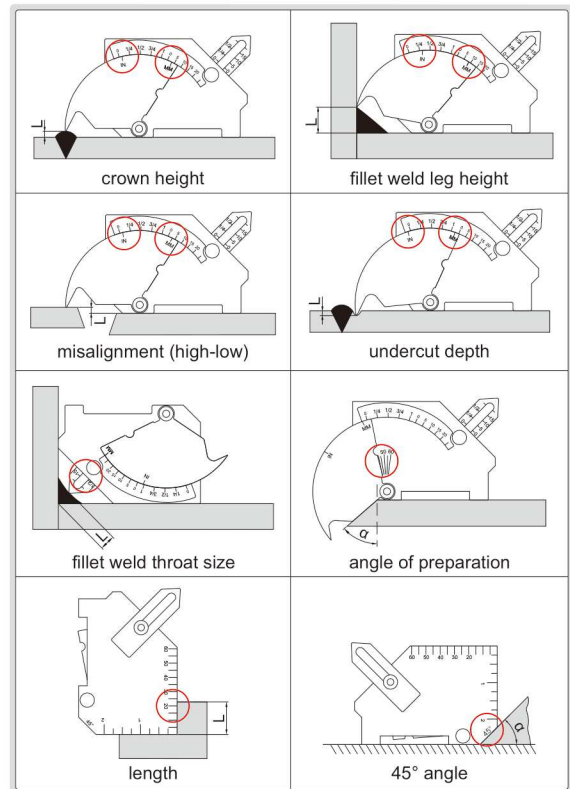
4835-1

back

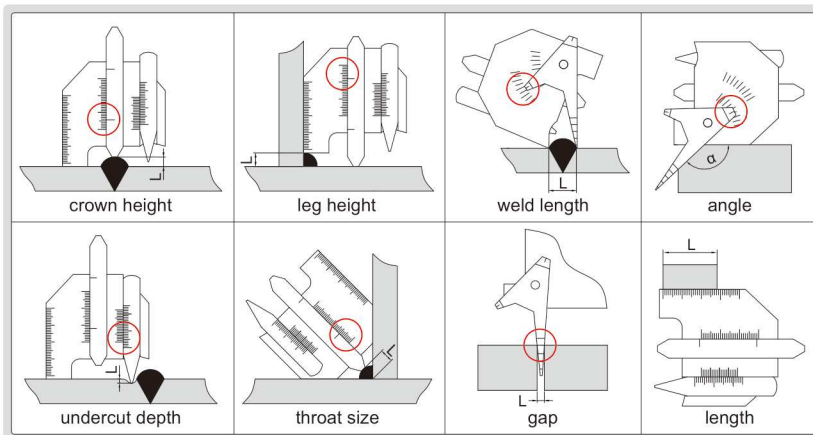


- Adjustable scale to compensate pointer wear
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4835-1	crown height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	fillet weld leg height	0-25mm (0-1")	1mm (1/16")	±0.5mm
	misalignment (high-low)	0-25mm (0-1")	1mm (1/16")	±0.5mm
	undercut depth	0-2mm (0-1/8")	1mm (1/16")	±0.5mm
	fillet weld throat size	0-20mm (0-3/4")	1mm (1/16")	±0.5mm
	angle of preparation	0-60°	5°	±1°
	length	0-60mm (0-2")	1mm (1/16")	±0.5mm
	45° angle	—	—	±1°



## WELDING GAGES



- Made of stainless steel

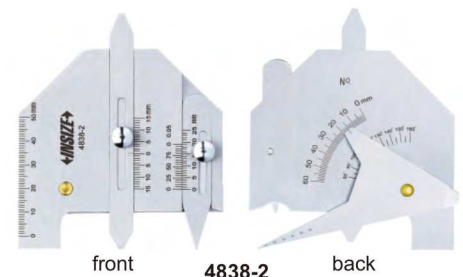
Measurement	Code 4838-1			Code 4838-2		
	Range	Graduation	Accuracy	Range	Graduation	Accuracy
crown height	0-10mm	1mm	±0.5mm	0-15mm	1mm	±0.5mm
leg height	0-14mm	1mm	±0.5mm	0-15mm	1mm	±0.5mm
undercut depth	0-5mm	0.05mm	±0.05mm	0-5mm	0.05mm	±0.05mm
throat size	0-13mm	1mm	±0.5mm	0-13mm	1mm	±0.5mm
weld length	0-40mm	1mm	±1mm	0-60mm	1mm	±1mm
angle	90°-150°	5°	±1°	80°-160°	5°	±1°
gap	0.5-5mm	1mm	±0.5mm	1-6mm	1mm	±0.5mm
length	0-40mm	1mm	±0.5mm	0-50mm	1mm	±0.5mm
LxW	62x77mm			99x84mm		



front

4838-1

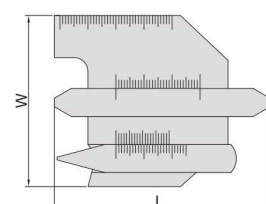
back



front

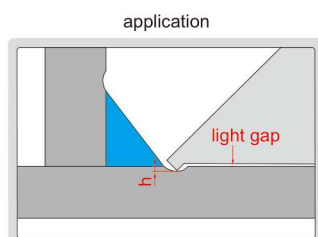
4838-2

back





## WELDING UNDERCUT GAGE



when there is a light gap,  $h < 0.25\text{mm}$ ;  
when there is no light gap,  $h \geq 0.25\text{mm}$

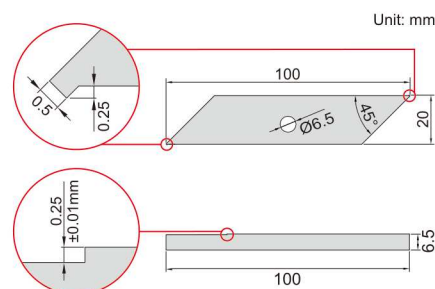
- Measure undercut
- Calibration block is included
- Made of stainless steel

**Code**  
**4849-1**



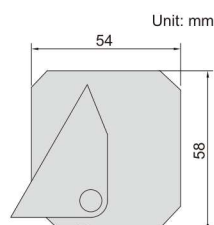
**4849-1**

calibration block (included)



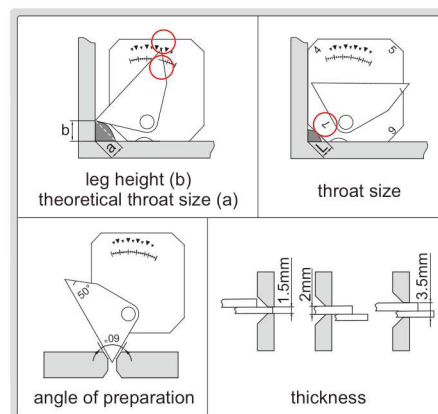
## WELDING GAGE

- Made of stainless steel

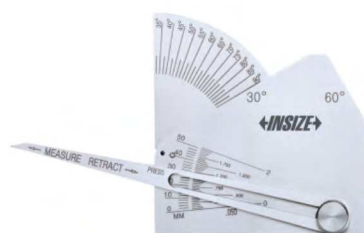
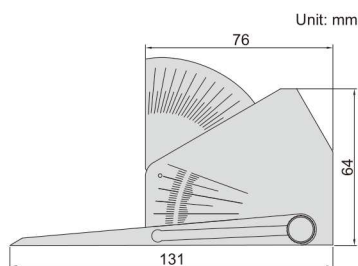


**4850-1**

Code	Measurement	Range	Graduation	Accuracy
4850-1	leg height (b)	0-18mm	1mm	$\pm 0.5\text{mm}$
	theoretical throat size (a)	2-12mm	1mm	$\pm 0.5\text{mm}$
	throat size	4, 5, 6, 7mm	—	$\pm 0.5\text{mm}$
	angle of preparation	50°, 60°	—	$\pm 1^\circ$
	thickness	1.5, 2, 3.5mm	—	$\pm 0.2\text{mm}$



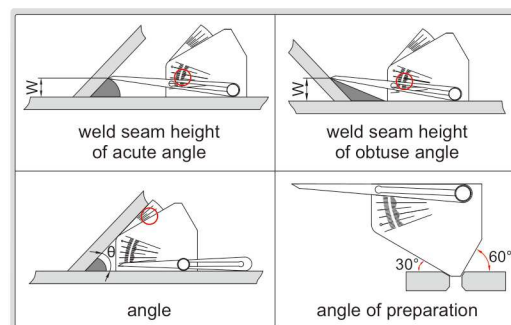
## FILLET WELDING GAGE



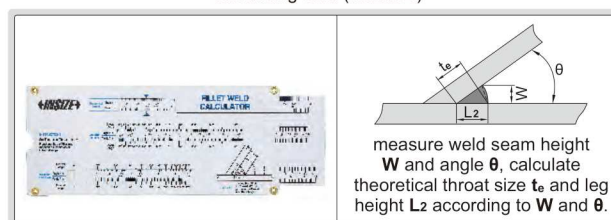
**4846-1**

- Calculating card is included
- Made of stainless steel

Code	Measurement	Range	Graduation	Accuracy
4846-1	weld seam height $W$	0-50mm/0-2"	2mm/0.05"	$\pm 1\text{mm}$
	angle $\theta$	30°-90°	2.5°	$\pm 1^\circ$
	60° angle	—	—	$\pm 0.5^\circ$



calculating card (included)



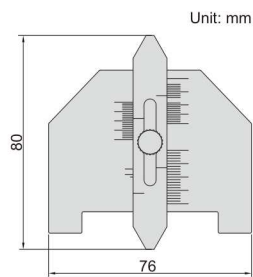
measure weld seam height  $W$  and angle  $\theta$ , calculate theoretical throat size  $t_e$  and leg height  $L_2$  according to  $W$  and  $\theta$ .



## WELDING GAGE

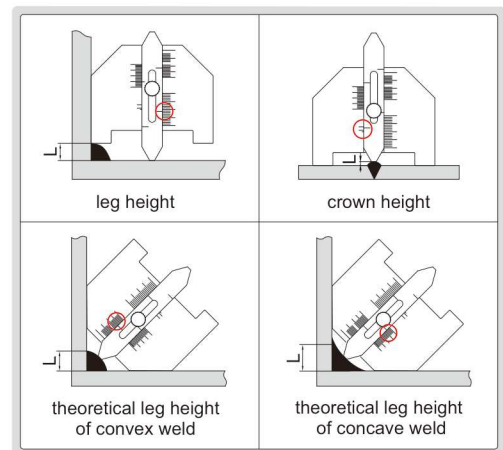


4851-1



- Made of stainless steel

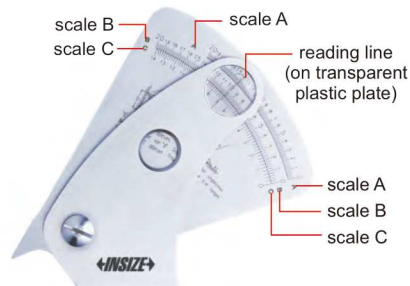
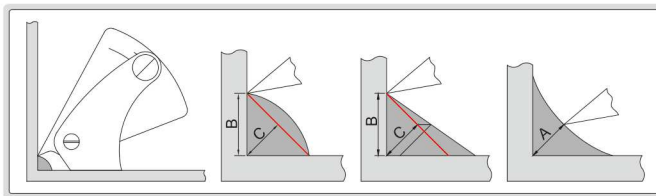
Code	Measurement	Range	Graduation	Accuracy
4851-1	leg height	0-20mm	1mm	±0.5mm
	crown height	0-3mm	—	±0.5mm
	theoretical leg height of convex weld	0-20mm	1mm	±0.5mm
	theoretical leg height of concave weld	0-20mm	1mm	±0.5mm



11

## WELDING GAGE

- Made of stainless steel

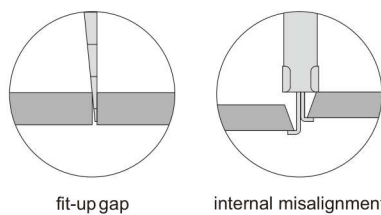


4840-1

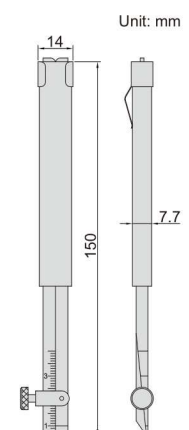
Code	Graduation	Accuracy
4840-1	0.2mm	±0.3mm

## PIPE WELDING GAGE

- Made of stainless steel



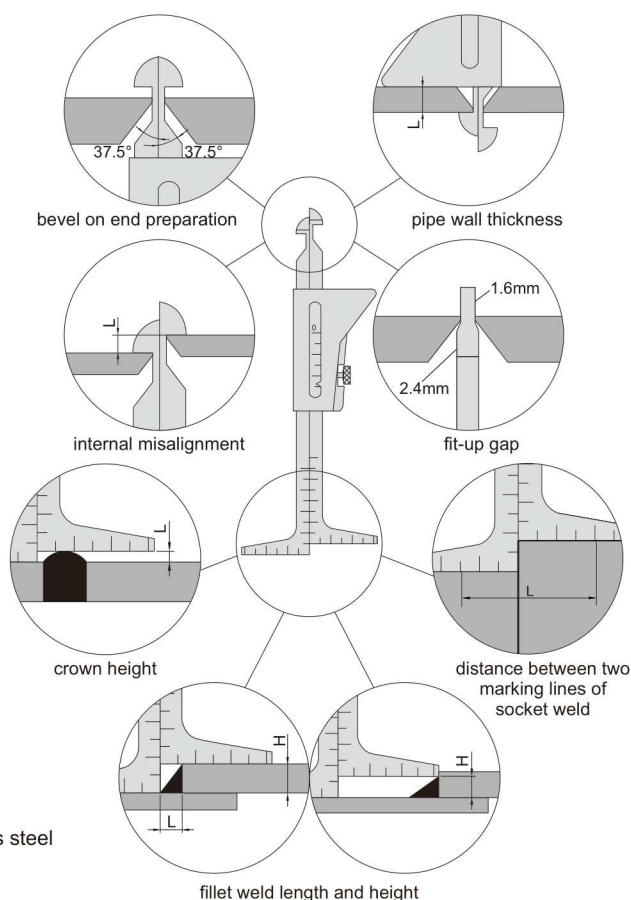
4841-1



Code	Measurement	Range	Graduation	Accuracy
4841-1	internal misalignment	0-30mm	1mm	±0.5mm
	fit-up gap	0.7-4mm	0.1mm	±0.1mm



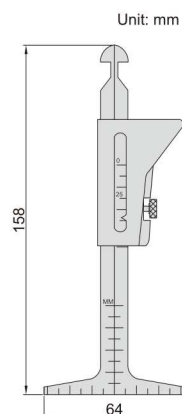
## PIPE WELDING GAGE



■ Made of stainless steel



4839-1



Code	Measurement	Range	Graduation	Accuracy
4839-1	bevel on end preparation	37.5°	—	±1°
	pipe wall thickness	0-45mm (0~1-3/4")	1mm (1/16")	±0.5mm
	internal misalignment	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	fit-up gap	1.6mm, 2.4mm	—	±0.1mm
	crown height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm
	distance between two marking lines of socket weld	0-60mm (0~2-3/8")	1mm (1/16")	±0.5mm
	fillet weld length	0-30mm (0~1-1/4")	1mm (1/16")	±0.5mm
	fillet weld height	0-35mm (0~1-3/8")	1mm (1/32")	±0.5mm

## 6-PIECE WELDING GAGE SET

- Includes:
  - 1) Welding gage (code **4834-1**)
  - 2) Fillet welding gage, size 3~25mm, 7 blades (code **4836-1**)
  - 3) Pipe welding gage (code **4841-1**)
  - 4) Telescoping inspection mirror, size of mirror Ø32mm, length 178~505mm (code **7160-1**)
  - 5) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
  - 6) LED flashlight (code **ISGF-0501**)



5064

Code  
5064



## 7-PIECE WELDING GAGE SET

### Includes:

- 1) Welding gage (code **4834-1**)
- 2) Welding gage (code **4851-1**)
- 3) Pipe welding gage (code **4839-1**)
- 4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 5) Telescoping inspection mirror, size of mirror Ø32mm, length 178~505mm (code **7160-1**)
- 6) Magnifier with illumination, magnification 4X (code **7513-4**)
- 7) Steel rule, range 150mm/6", graduation 0.5mm, 1mm, 1/64", 1/32", 1/16" (code **7110-150**)

Code

5071



5071

## 7-PIECE WELDING GAGE SET

### Includes:

- 1) Welding gage (code **4834-1**)
- 2) Welding gage (code **4851-1**)
- 3) Fillet welding gage, size 3~25mm, 7 blades (code **4836-1**)
- 4) Outside micrometer, range 0-25mm, graduation 0.01mm (code **3203-25A**)
- 5) Digital caliper, range 0-150mm/0-6", resolution 0.01mm/0.005" (code **1108-150**)
- 6) Pocket rule with sliding clip, range 150mm/6", graduation 1mm, 1/64" (code **7119-150**)
- 7) Magnifier with illumination, magnification 4X (code **7513-4**)

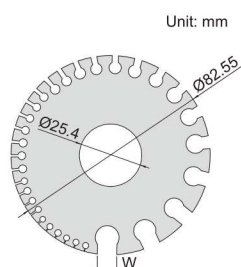
Code

5072



5072

## AMERICAN STANDARD WIRE GAGE



Unit: mm



4808

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC50-57

Code

Range

4808 0-36 (8.250-0.127mm/0.3249-0.0050")

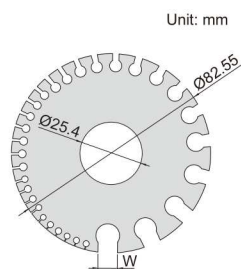
No.	W	No.	W
0	8.250mm/0.3249"	18	1.020mm/0.0403"
1	7.350mm/0.2893"	19	0.912mm/0.0359"
2	6.540mm/0.2576"	20	0.813mm/0.0320"
3	5.830mm/0.2294"	21	0.724mm/0.0285"
4	5.190mm/0.2043"	22	0.643mm/0.0253"
5	4.620mm/0.1819"	23	0.574mm/0.0226"
6	4.110mm/0.1620"	24	0.511mm/0.0201"
7	3.670mm/0.1443"	25	0.440mm/0.0179"
8	3.260mm/0.1285"	26	0.404mm/0.0159"
9	2.910mm/0.1144"	27	0.361mm/0.0142"
10	2.590mm/0.1019"	28	0.320mm/0.0126"
11	2.300mm/0.0907"	29	0.287mm/0.0113"
12	2.050mm/0.0808"	30	0.254mm/0.0100"
13	1.820mm/0.0720"	31	0.226mm/0.0089"
14	1.630mm/0.0641"	32	0.203mm/0.0080"
15	1.450mm/0.0571"	33	0.180mm/0.0071"
16	1.290mm/0.0508"	34	0.160mm/0.0063"
17	1.150mm/0.0453"	35	0.142mm/0.0056"
		36	0.127mm/0.0050"



## U.S. STANDARD SHEET METAL GAGE

No.	W
0	7.938mm/0.3125"
1	7.144mm/0.2813"
2	6.747mm/0.2656"
3	6.350mm/0.2500"
4	5.953mm/0.2344"
5	5.556mm/0.2188"
6	5.159mm/0.2031"
7	4.763mm/0.1875"
8	4.366mm/0.1719"
9	3.969mm/0.1563"
10	3.572mm/0.1406"
11	3.175mm/0.1250"
12	2.778mm/0.1094"
13	2.381mm/0.0938"
14	1.984mm/0.0781"
15	1.786mm/0.0703"
16	1.588mm/0.0625"
17	1.429mm/0.0563"

No.	W
18	1.270mm/0.0500"
19	1.111mm/0.0438"
20	0.953mm/0.0375"
21	0.873mm/0.0344"
22	0.794mm/0.0313"
23	0.714mm/0.0281"
24	0.635mm/0.0250"
25	0.556mm/0.0219"
26	0.476mm/0.0188"
27	0.437mm/0.0172"
28	0.397mm/0.0156"
29	0.357mm/0.0141"
30	0.318mm/0.0125"
31	0.278mm/0.0109"
32	0.258mm/0.0102"
33	0.238mm/0.0094"
34	0.218mm/0.0086"
35	0.198mm/0.0078"
36	0.179mm/0.0070"



4809

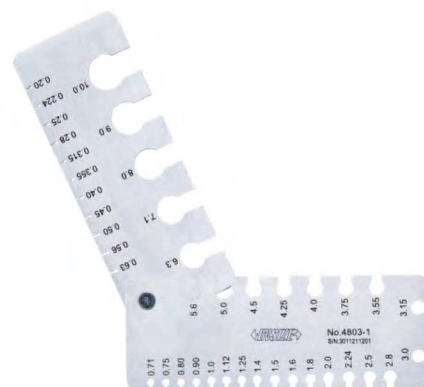
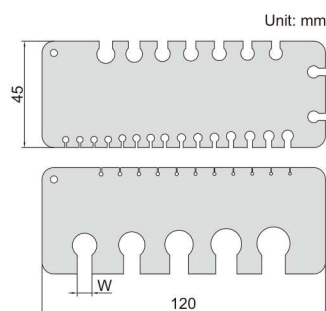
- For gaging sheet metal, plate iron and steel
- Hardened to HRC50-57

Code	Range
4809	0-36 (7.938-0.179mm/0.3125-0.0070")

## SQUARE WIRE GAGE

wire diameter (W)
0.200mm
0.224mm
0.250mm
0.280mm
0.315mm
0.355mm
0.400mm
0.450mm
0.500mm
0.560mm
0.630mm
0.710mm
0.750mm
0.800mm
0.900mm
1.000mm
1.120mm
1.250mm
1.400mm
1.500mm

wire diameter (W)
1.60mm
1.80mm
2.00mm
2.24mm
2.50mm
2.80mm
3.00mm
3.15mm
3.55mm
3.75mm
4.00mm
4.25mm
4.50mm
5.00mm
5.60mm
6.30mm
7.10mm
8.00mm
9.00mm
10.00mm



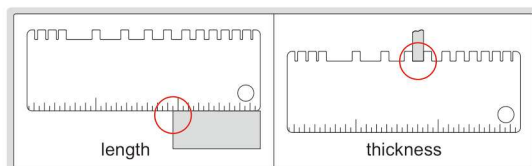
4803-1

- For gaging non-ferrous wire and metals such as copper, brass and aluminum
- Hardened to HRC51-53
- Including 2 pcs wire gages

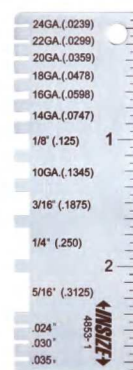
Code	Range
4803-1	0.2-10mm

## THICKNESS GAGE

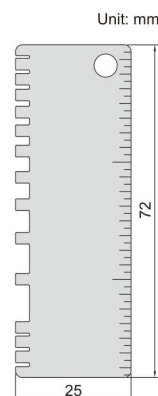
- Made of stainless steel



Code	Measurement	Range	Graduation	Accuracy
4853-1	length	0-2 3/4"	1/16"	1/32"
	thickness	24GA. (0.0239"), 22GA. (0.0299"), 20GA. (0.0359")	—	±0.002"
		18GA. (0.0478"), 16GA. (0.0598"), 14GA. (0.0747"), 1/8" (0.125"), 10GA. (0.1345"), 3/16" (0.1875"), 1/4" (0.250"), 5/16" (0.3125")		±0.004"
		0.024", 0.030", 0.035"		±0.002"



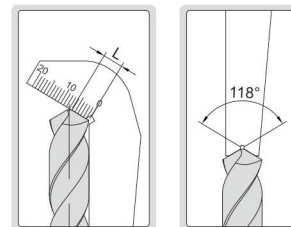
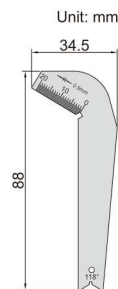
4853-1





## DRILL POINT GAGE

- For twist drills with 118° angle, to check if the center of tip is concentric with the drill body
- Made of stainless steel

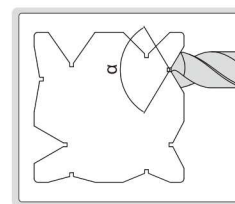
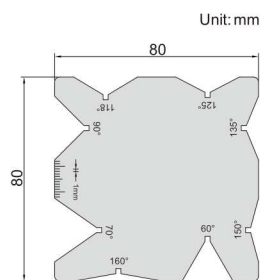


Code	Accuracy	
	Angle	Length
4843-1	±0.5°	±0.5mm

4843-1

## DRILL ANGLE GAGE

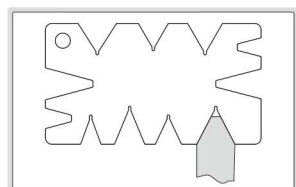
- Check drills with angle 60°, 70°, 90°, 118°, 125°, 135°, 150° or 160°
- Made of stainless steel



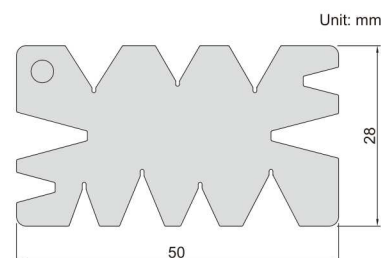
Code	Accuracy
4842-1	±0.5°

4842-1

## ANGLE GAGE



check the angle of screw cutting tools



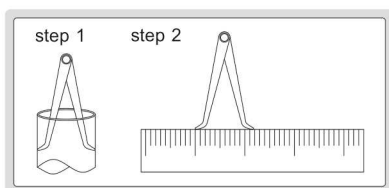
4854-1

- Made of stainless steel

Code	Range	Accuracy
4854-1	29°, 30°, 40°, 45°, 50°, 55°, 60°	±10'



## INSIDE CALIPERS

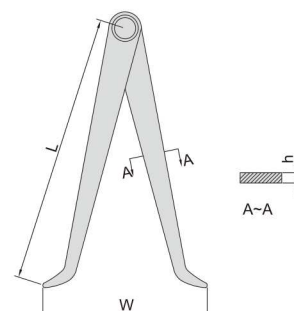


- Made of carbon steel

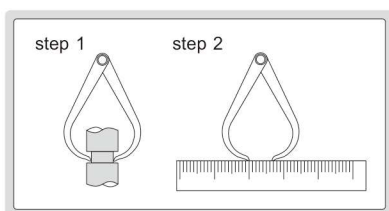
Code	Size (L)	Range (W)	h
7240-150	150mm	17-150mm	2mm
7240-200	200mm	17-200mm	3mm
7240-300	300mm	18-300mm	3mm



7240-150



## OUTSIDE CALIPERS

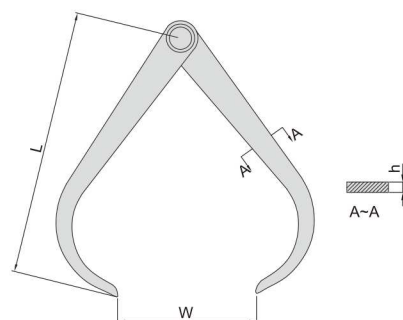


- Made of carbon steel

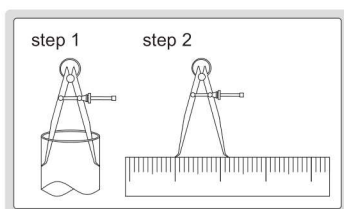
Code	Size (L)	Range (W)	h
7241-150	150mm	0-150mm	2mm
7241-200	200mm	0-200mm	3mm
7241-300	300mm	0-300mm	3mm



7241-150



## INSIDE SPRING CALIPERS

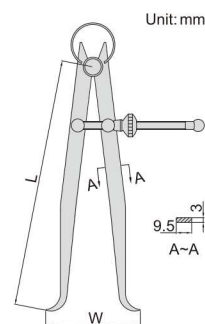


- Made of carbon steel

Code	Size (L)	Range (W)
7261-150	150mm	20-170mm
7261-200	200mm	22-220mm
7261-250	245mm	30-270mm
7261-300	300mm	30-320mm

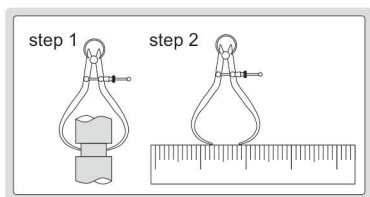


7261-150





## OUTSIDE SPRING CALIPERS

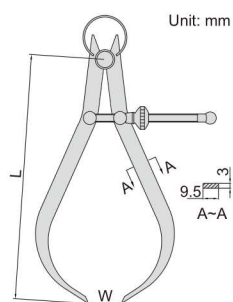


- Made of carbon steel

Code	Size (L)	Range (W)
7262-150	155mm	0-140mm
7262-200	210mm	0-210mm
7262-250	265mm	0-270mm
7262-300	310mm	0-320mm

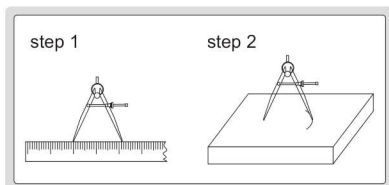


7262-150



## SPRING DIVIDERS

11

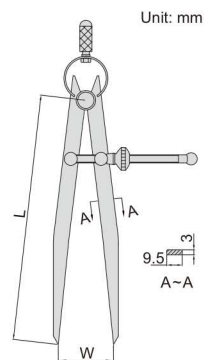


- Made of carbon steel
- Hardened points

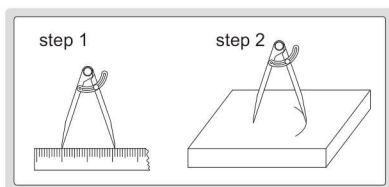
Code	Size (L)	Range (W)
7260-150	150mm	0-150mm
7260-200	200mm	0-210mm
7260-250	245mm	0-260mm
7260-300	300mm	0-320mm



7260-150



## DIVIDERS

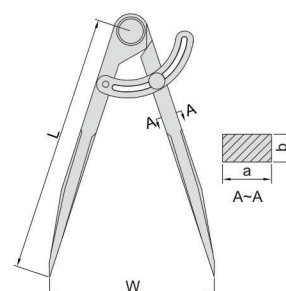


- Made of carbon steel
- Hardened points

(mm)				
Code	Size (L)	Range (W)	a	b
7247-150	150mm	0-140mm	8.5	7
7247-200	200mm	0-190mm	10	7
7247-300	300mm	0-290mm	12	7



7247-150

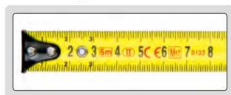




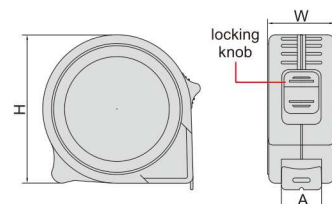
EG  
II

## MEASURING TAPES

graduation



7140-5



- Non-glare nylon surface for wear resistance

Individual (1 pc per package)

Code	Range	Graduation	Width of tape A	W	H
7140-3	0-3m	1mm	16mm	28mm	62mm
7140-5	0-5m	1mm	19mm	30mm	68mm
7140-8	0-8m	1mm	25mm	38mm	78mm

Set (12 pcs per package)

Code	Range	Graduation	Width of tape A	W	H
7140-3A	0-3m	1mm	16mm	28mm	62mm
7140-5A	0-5m	1mm	19mm	30mm	68mm
7140-8A	0-8m	1mm	25mm	38mm	78mm

EG  
II

## MEASURING TAPE (BASIC TYPE)

graduation



7142-5

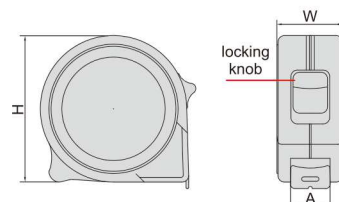
- Non-glare nylon coating tape, wear resistance

Individual (1 pc per package)

Code	Range	Graduation	Width of tape A	W	H
7142-5	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm

Set (12 pcs per package)

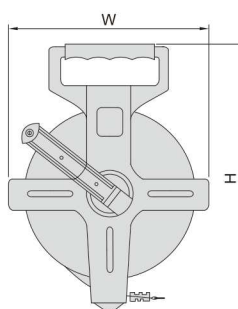
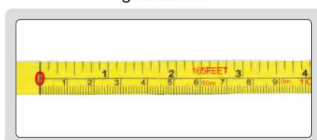
Code	Range	Graduation	Width of tape A	W	H
7142-5A	0-5m/0-16ft	1mm, 1/16"	19mm	31mm	64mm



EG  
II

## LONG MEASURING TAPE

graduation



- High tensile strength fibreglass tape
- Nylon coating tape, wear resistance



7143-50

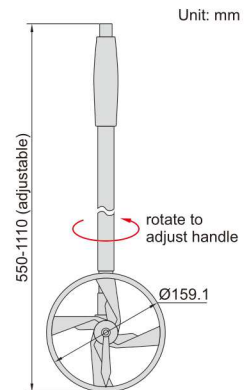
Code	Range	Graduation	Width of tape	W	H
7143-50	0-50m/0-165ft	1mm, 1/8"	13mm	220mm	320mm



## MEASURING WHEEL (BASIC TYPE)

- ABS plastic frame, wear-resistant PU tire
- Three-section adjustable handle

Code	Range	Resolution
7144-1	0.1-9999.9m	0.1m



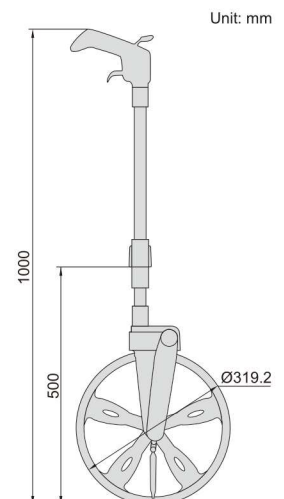
## MEASURING WHEEL

11

- ABS plastic frame, wear-resistant PU tire
- Two-section foldable handle

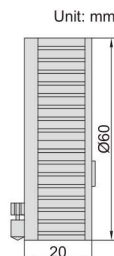
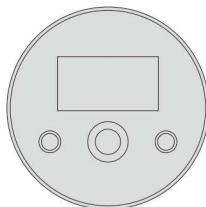


Code	Range	Resolution
7145-1	0.1-9999.9m	0.1m



## DIGITAL MEASURING WHEEL

**IP40**  
WATERPROOF



7146-10

- IP40 dust/waterproof
- Measuring length of curve
- Four measurement modes: length, rectangle area, diameter of circle, cube
- Resolution: 0.001m/0.01ft
- Button function: on/off, mm/inch, one or two sides set, measurement mode conversion, measurement
- Battery CR2032, automatic power off

Code	Range	Accuracy
7146-10	0-10m/0-32.8ft	±0.3%L (L is the measured length)



## RIGID RULE

- Rigid rules
- With groove on the back, suitable for combination square set (2278 series)
- Satin chrome plated



7113-300A



groove on the back

Unit: mm

Code	Range	Graduation		Accuracy	L
		front	back		
7113-300A	300mm/12"	0.5mm and 1/32"	1mm and 1/64"	±0.15mm	300mm



## POCKET RULE WITH SLIDING CLIP

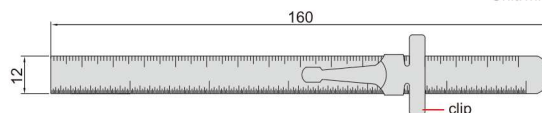
- With sliding clip, clip can be inserted in the pocket, also can be used as depth gage base
- Inch/metric conversion table on the back
- Made of stainless steel



7119-150

Unit: mm

Code	Range	Graduation	Accuracy
7119-150	150mm/6"	1mm, 1/64"	±0.15mm



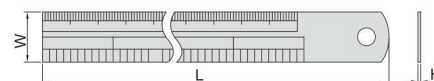
11

ATTENTION:  
LOW ACCURACY

## STEEL RULES (ECONOMIC TYPE)



7110-300



Individual (1 pc per package)

(mm)

Code	Range	Accuracy	L	W	H	Remark
7110-150	150mm/6"	±0.18mm	170	18	1.0	graduation on front and back
7110-200	200mm/8"	±0.18mm	220	18	1.0	graduation on front and back
7110-300	300mm/12"	±0.27mm	330	25	1.0	graduation on front and back
7110-3001	300mm/12"	±0.27mm	325	30	1.0	graduation on front and back
7110-500	500mm/20"	±0.27mm	530	30	1.2	graduation on front and back
7110-600	600mm/24"	±0.45mm	630	30	1.2	graduation on front and back
7110-1000	1000mm/40"	±0.45mm	1040	32	1.5	graduation on front and back
7110-1200	1200mm/48"	±0.63mm	1240	35	1.8	graduation on front
7110-1500	1500mm/60"	±0.63mm	1550	38	1.8	graduation on front
7110-2000	2000mm/80"	±0.80mm	2065	40	2.0	graduation on front

- Graduation: 0.5mm, 1mm, 1/64", 1/32", 1/16"
- Rigid rules
- Made of stainless steel
- Non-glare surface

Set

(mm)

Code	Range	Accuracy	L	W	H	Remark	Quantity per package
7110-150A	150mm/6"	±0.18mm	170	18	1.0	graduation on front and back	10 pcs
7110-200A	200mm/8"	±0.18mm	220	18	1.0	graduation on front and back	10 pcs
7110-300A	300mm/12"	±0.27mm	330	25	1.0	graduation on front and back	5 pcs
7110-3001A	300mm/12"	±0.27mm	325	30	1.0	graduation on front and back	5 pcs
7110-500A	500mm/20"	±0.27mm	530	30	1.2	graduation on front and back	5 pcs
7110-600A	600mm/24"	±0.45mm	630	30	1.2	graduation on front and back	5 pcs
7110-1000A	1000mm/40"	±0.45mm	1040	32	1.5	graduation on front and back	5 pcs
7110-1200A	1200mm/48"	±0.63mm	1240	35	1.8	graduation on front	5 pcs
7110-1500A	1500mm/60"	±0.63mm	1550	38	1.8	graduation on front	5 pcs
7110-2000A	2000mm/80"	±0.80mm	2065	40	2.0	graduation on front	5 pcs

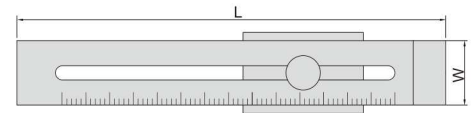
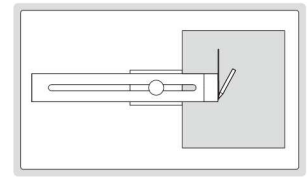


## MARKING GAGES

- Made of carbon steel
- Satin chrome plated

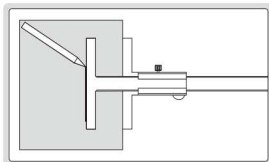


7120-200A

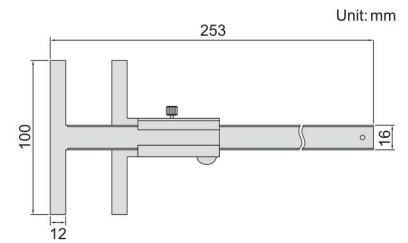


Code	Range	Graduation	Accuracy	L	W
7120-200A	0-200mm	0.1mm	±0.1mm	250mm	40mm
7120-250A	0-250mm	0.1mm	±0.1mm	300mm	40mm
7120-300A	0-300mm	0.1mm	±0.1mm	350mm	40mm

## T-SHAPE MARKING GAGE



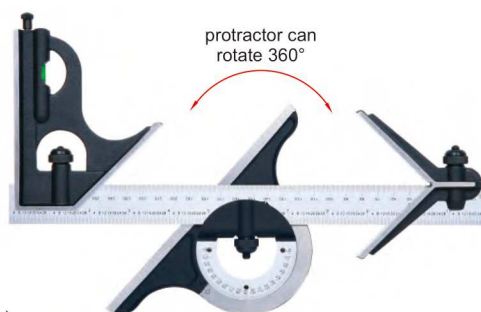
1275-150B



- Made of stainless steel
- Satin chrome plated reading surface

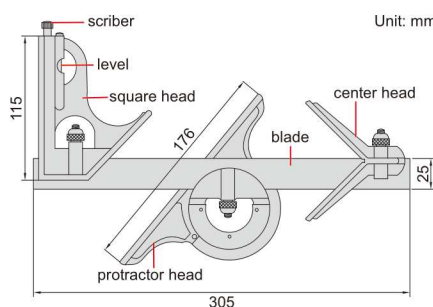
Code	Range	Graduation	Accuracy
1275-150B	0-150mm	0.02mm	±0.04mm

## COMBINATION SQUARE SET



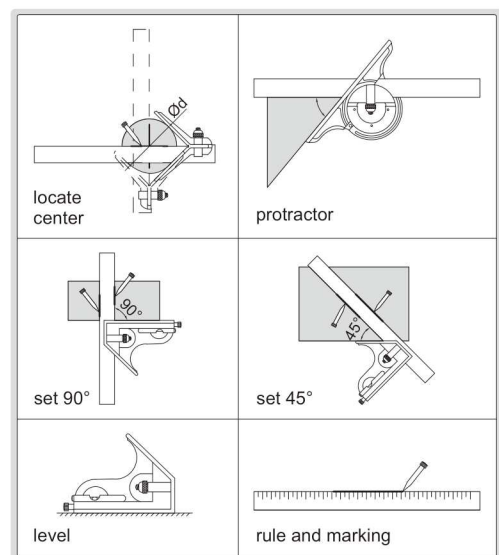
2274-4

- Center head (made of cast iron): to locate center of cylinders with diameter (Ød): 30-100mm accuracy: ±0.15mm
- Protractor head (made of cast iron): set the blade at desired angle to an edge of a workpiece, and can be used to measure angles range: 0-180° accuracy: ±20min.
- Square head (made of cast iron): set the blade at 90° or 45° to an edge of a workpiece accuracy: ±8min for 90° square, ±10min for 45° square
- Blade (made of stainless steel): range: 300mm/12", graduation: 0.5mm and 1/32" on front face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code 7113)



Unit: mm

Code	Remark
2274-4	4-piece set





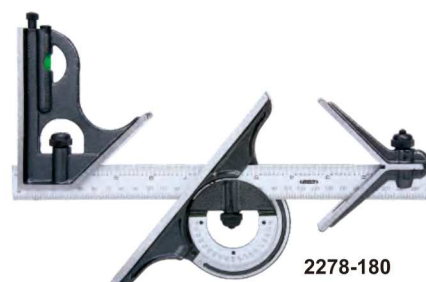
## COMBINATION SQUARE SETS



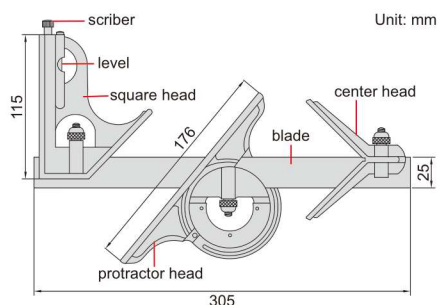
2278-2



2278-3

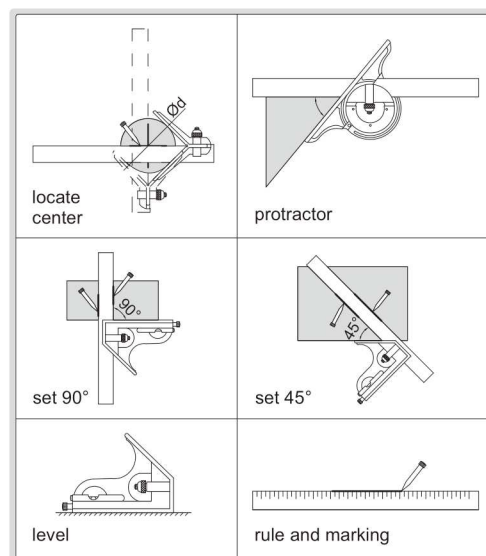


2278-180



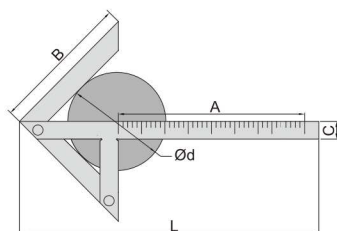
- Center head (made of cast iron): to locate center of cylinders with diameter ( $\varnothing$ ): 30-100mm accuracy:  $\pm 0.15$ mm
- Protractor head (made of cast iron): set the blade at desired angle to an edge of a workpiece, and can be used to measure angles range: 0-180° accuracy:  $\pm 20$ min.
- Square head (made of cast iron): set the blade at 90° or 45° to an edge of a workpiece accuracy:  $\pm 8$ min for 90° square,  $\pm 10$ min for 45° square
- Blade (made of stainless steel): range: 300mm/12", graduation: 0.5mm and 1/32" on front face, 1mm and 1/64" on back face
- Optional accessory: rigid rule (code 7113)

Code	Remark
2278-2	2-piece set
2278-3	3-piece set
2278-180	4-piece set



11

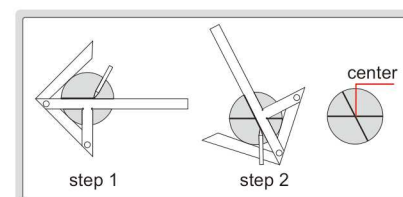
## CENTER MARKING GAGES



7205-100

- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

Code	Size (AxB)	Diameter of shafts ( $\varnothing$ d)	Accuracy	C	L
7205-100	100x70mm	4-90mm	$\pm 0.15$ mm	12mm	153mm
7205-150	150x130mm	4-190mm	$\pm 0.15$ mm	15mm	245mm
7205-200	200x150mm	6-220mm	$\pm 0.15$ mm	15mm	310mm
7205-300	300x180mm	6-270mm	$\pm 0.15$ mm	20mm	435mm





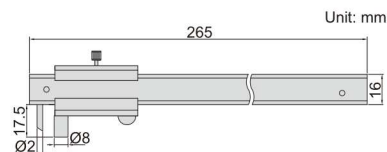
## SCRIBING CALIPER



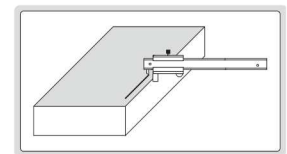
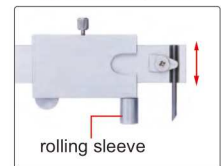
7202-200A

- Made of stainless steel
- Satin chrome plated reading surface
- Carbide scriber tip
- Optional accessory: carbide scriber tip (code **SP-SCRIBER-7202**)

Code	Range	Graduation	Accuracy
7202-200A	0-200mm/0-8"	0.1mm, 1/128"	±0.1mm



the position of scriber tip can be adjusted



## DIGITAL SCRIBING CALIPERS

DATA  
OUTPUT

- The carbide-tipped jaws facilitate scribing on workpieces
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

With data interface (data output cable code 7315-21, 7302-21, optional)

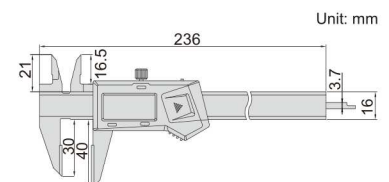
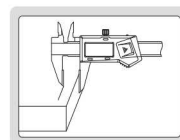
Code	Range	Accuracy
1166-150A	0-150mm/0-6"	±0.03mm

Built-in wireless (receiver code 7315-2/3/6/7/8 is required)

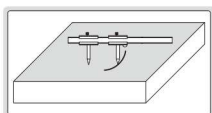
Code	Range	Accuracy
1166-150AWL	0-150mm/0-6"	±0.03mm



1166-150A



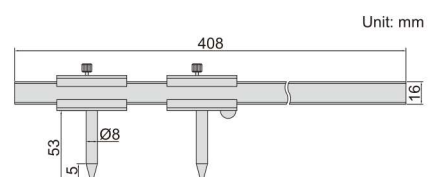
## SCRIBING CALIPER



7203-300A

- Made of stainless steel
- Satin chrome plated reading surface
- Hardened scriber tips

Code	Range	Graduation	Accuracy
7203-300A	51-300mm	0.1mm	±0.1mm





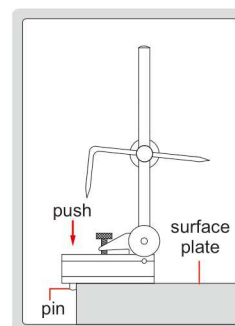
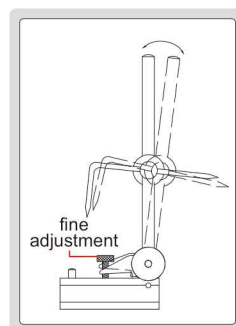
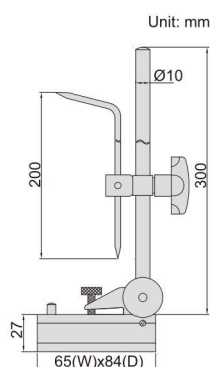
## HEIGHT SCRIBER

- Grooved bottom for cylinders
- Two pins to be set against the edge of surface plate

Code

6990-300A

6990-300A



## SCRIBERS

Unit: mm

- 7230 and 7231 are nickel plated, 7232 is zinc-plated

Code	Tip
7230	hardened tips
7231	hardened tip
7232	carbide tip



7230

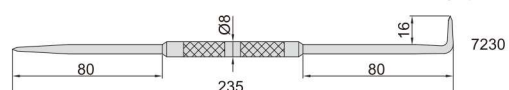


7231

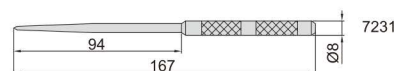


7232

clip



7230



7231



7232

## PRECISION SCREWDRIVER SET CODE ISGF-0901

- Includes:  
4 pcs "-": 1.4mm, 2.0mm, 2.4mm, 3.0mm  
2 pcs "+": 0#, 1#
- Rotating cap
- Material: CRV, hardness: HRC52~56

packaging



ISGF-0901

## LED FLASHLIGHT CODE ISGF-0501

- Toshiba high performance LED
- Powered by 3x AAA batteries (batteries are not included)
- Max output: 120 lumens
- Battery life: 4 hours
- Beam distance: 70 meters
- IP54 dust/waterproof

packaging



ISGF-0501