

# ANGLE, STRAIGHTNESS, FLATNESS MEASUREMENT

15



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**Straight Edges**  
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## DIGITAL ANGLE METER CODE 2177-121



VIDEO



- Clockwise and counter-clockwise operation
- 9 target angle values can be set, with audible and visible alarm:
  - Green LED light on and buzzer sounds when angle value is 80%~99.5% of target angle
  - Both green and red LED light on and buzzer sounds when angle value is over 99.5% of target angle
- Memory of 250 results, can upload to the computer
- Back with magnet
- Power off in 2 minutes automatically

### SPECIFICATION

Display range	0~999°
Setting range	1~360° (increment 1°)
Resolution	0.1°
Accuracy	±2° for 90° rotation @30°/sec
Power supply	2×1.5V AAA batteries
Dimension	58×58×41mm
Weight	70g

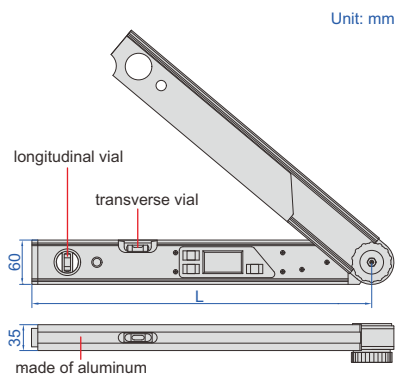


## WATERPROOF DIGITAL PROTRACTOR (HEAVY DUTY)

AUTOMATIC  
BACKLIGHT

ABSOLUTE  
LEVEL

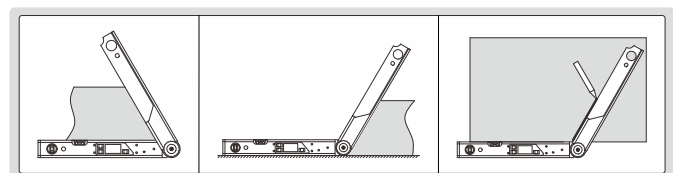
IP54  
WATERPROOF



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

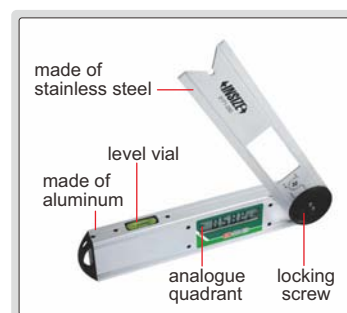
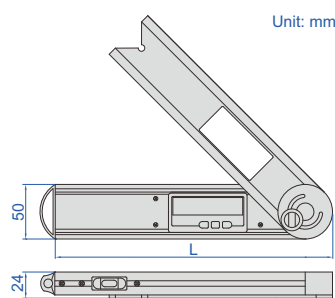
Code	Size (L)	Range	Resolution	Accuracy
2174-225	460mm	0-225°	0.05°	±0.10°



## DIGITAL PROTRACTOR

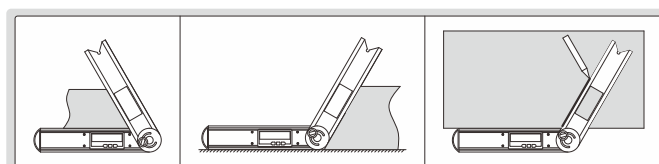


2171-250



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

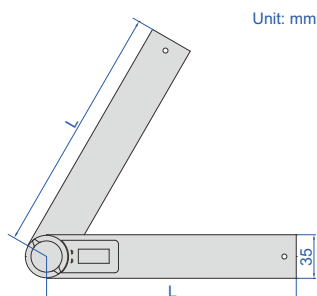
Code	Size (L)	Range	Resolution	Accuracy
2171-250	250mm	0-360°	0.05°	±0.15°



## DIGITAL PROTRACTORS

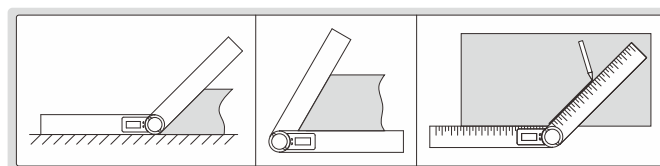


2176-200



- 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°



REFER TO PAGE  
498-500 FOR DETAILS

## DIGITAL LEVELS AND SLOPE METERS



2179-360



2175-360



2199-1



2170-1

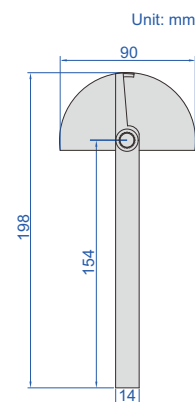
## PROTRACTOR (ECONOMIC TYPE)

- Graduation: 1°
- Made of stainless steel
- With clamping screw

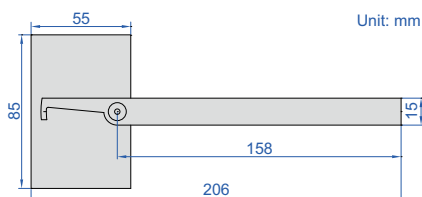


4780-85A

Code	Size	Range	Accuracy
4780-85A	90x154mm	0-180°	±0.5°



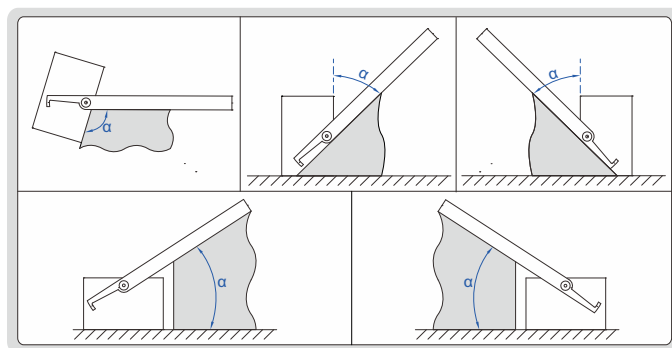
## PROTRACTOR



4781-85A

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw

Code	Size	Range	Graduation	Accuracy
4781-85A	85x158mm	0-180°	1°	±0.3°



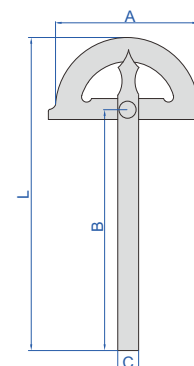
## PROTRACTORS

- 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

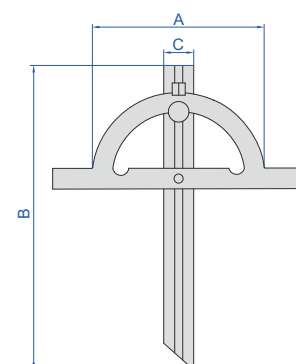
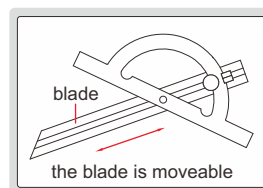


## PROTRACTORS

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



4797-100

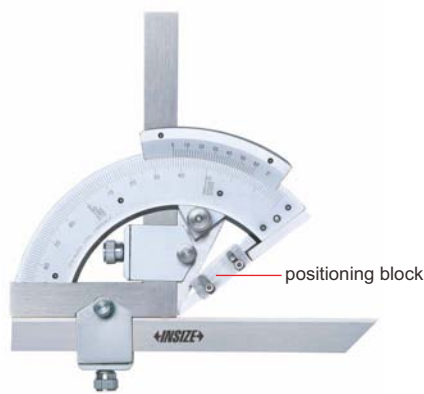


Code	Size (AxB)	Range	Accuracy	C
4797-100	100x150mm	10-170°	±0.3°	18mm
4797-150	150x300mm	10-170°	±0.3°	22mm
4797-200	200x400mm	10-170°	±0.3°	24mm
4797-250	250x500mm	10-170°	±0.3°	28mm
4797-300	300x600mm	10-170°	±0.3°	32mm

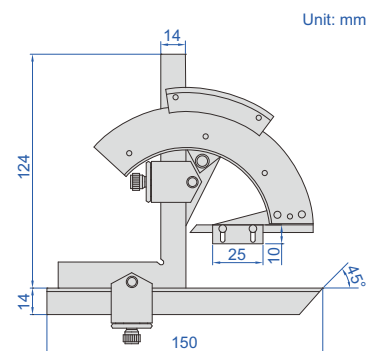
## PROTRACTORS



2374-320

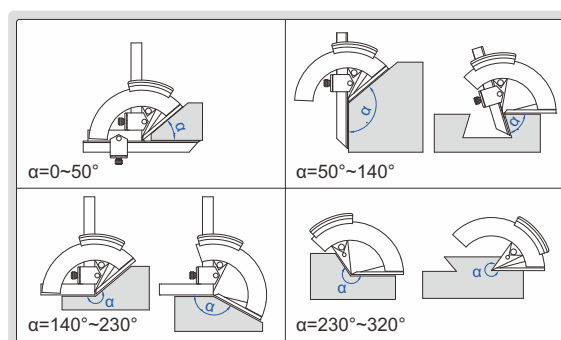


2374-320D



Unit: mm

- Made of stainless steel
- Satin chrome plated scale



application of 2374-320D

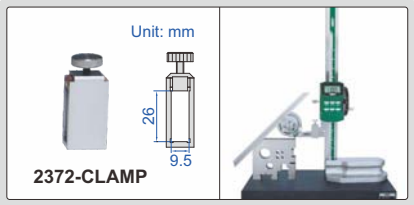


the positioning block can be moved down for positioning, and moved up when not in use

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

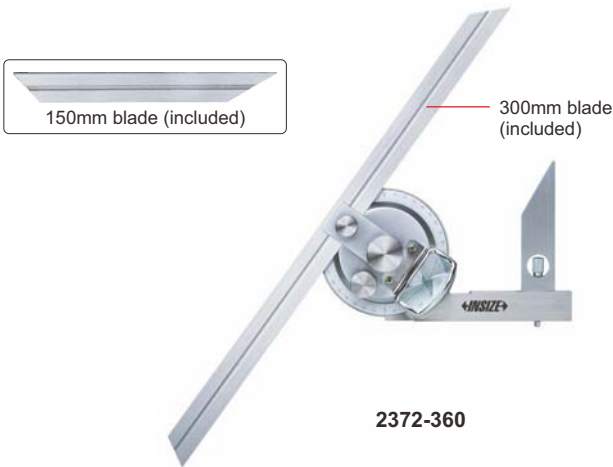
# UNIVERSAL PROTRACTOR

clamp for height gages (optional)

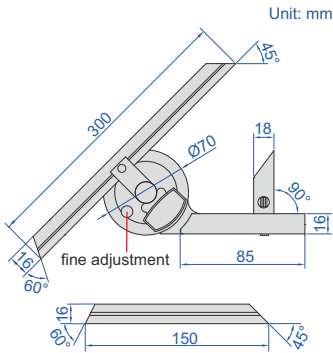


- Parallax-free reading
- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1150-300**, **1351**, **1250** and **1151**

Code	Range	Graduation	Accuracy
<b>2372-360</b>	0-360°	5'	±5'

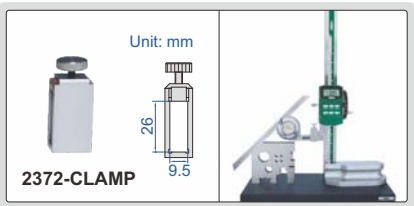


**2372-360**



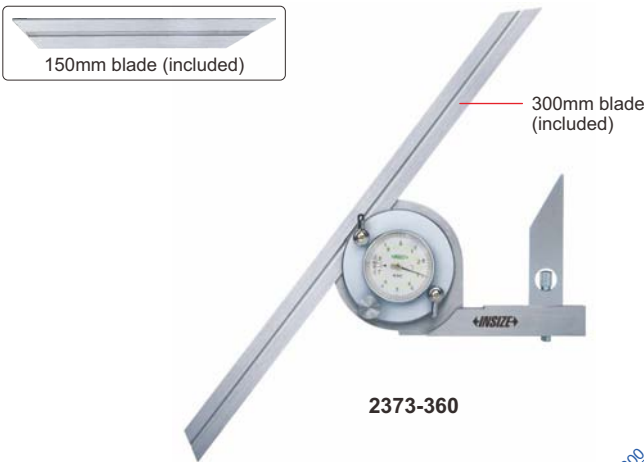
# DIAL PROTRACTOR

clamp for height gages (optional)

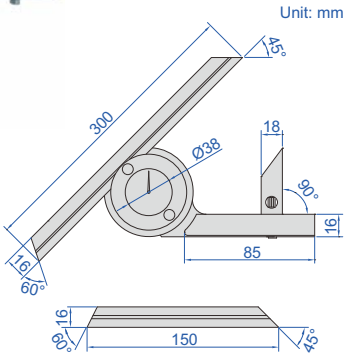


- Made of stainless steel
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1150-300**, **1351**, **1250** and **1151**

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



**2373-360**



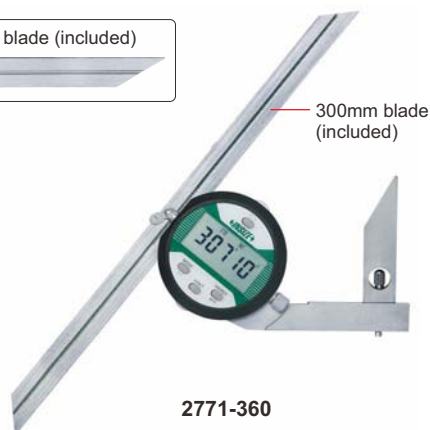
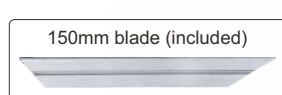


DATA  
OUTPUT

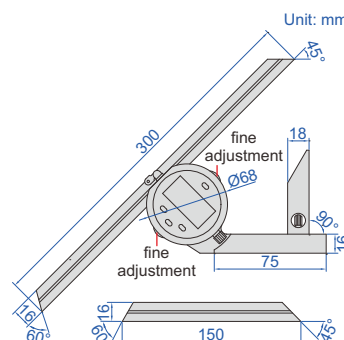
ABSOLUTE  
ZERO

POPULAR  
MODEL

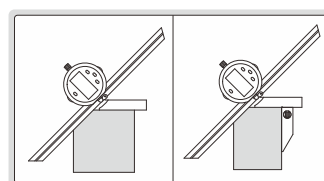
## DIGITAL PROTRACTOR



2771-360



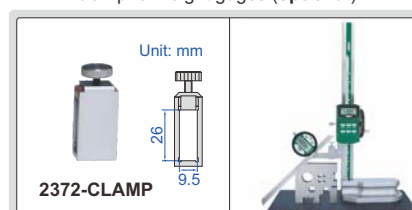
- Absolute zero, zero setting is not needed when batteries are replaced
- Button function: choose 0-90°, 0-180° or 0-360° display, change resolution, display flips over, data hold, zero, on/off supplementary angle measurement
- Battery CR2032, automatic power off, data output
- Made of stainless steel
- Optional square for zero setting
- Optional accessory: clamp (code **2372-CLAMP**), suitable for height gages **1156**, **1150-300**, **1351**, **1250** and **1151**, data output cable (code **7315-2771** need receiver page 6, **7302-50M** page 13)



square (optional)



clamp for height gages (optional)



Square  
(for zero setting,  
optional)

Code  
2771-S90

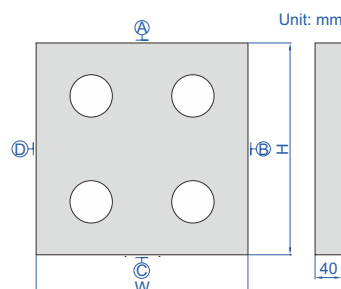
Code	Range	Resolution	Accuracy
2771-360	0-360°	1'/0.01°	±5'

## GRANITE SQUARE

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



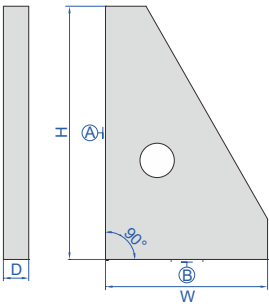
4144-315



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 SQUARES

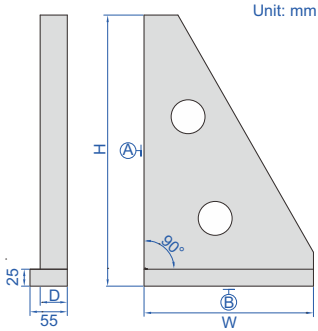
CUSTOM-MADE  
SUPPLY SPECIAL SIZES ACCORDING  
TO CUSTOMER'S REQUEST



type A



4141-250



type B

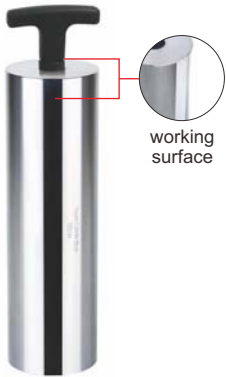
Unit: mm



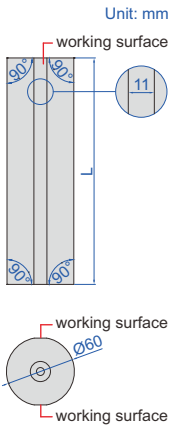
4141-400B

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

## CYLINDER SQUARES

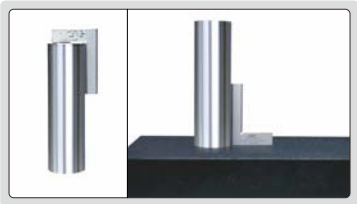


4710-200



Unit: mm

inspect 90° internal and external angles



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

Code	Length (L)	Squareness
4710-200*	200mm	1μm
4710-300*	300mm	2μm

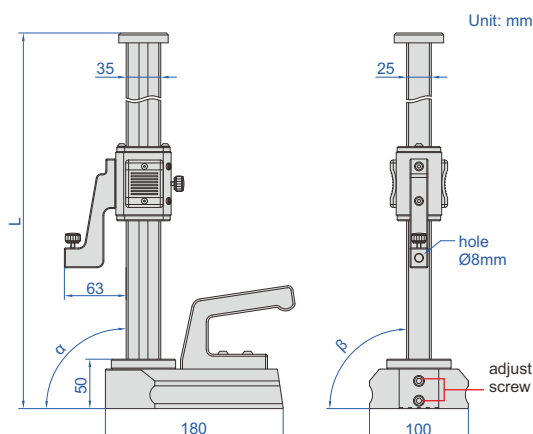
\*Supplied with manufacturer inspection certificate



## PERPENDICULARITY TESTERS



VIDEO



4770-300



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

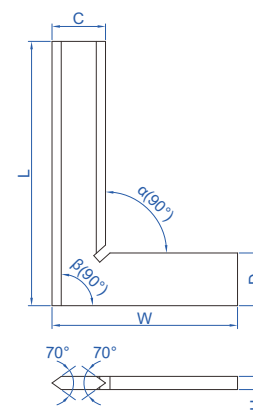
Code	Range (H)	Perpendicularity (α)	Side perpendicularity (β)	L
4770-300	0-300mm	3μm	10μm	460mm
4770-600	0-600mm	5μm	20μm	760mm

## 90° BEVELED EDGE SQUARES

- 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

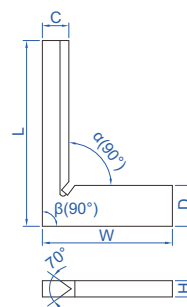
DIN875 grade 0		(mm)				
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4790-500	50x40mm	6μm	6μm	13	13	4
4790-750	75x50mm	6μm	7μm	15	15	4
4790-1000	100x70mm	7μm	7μm	20	20	5
4790-1500	150x100mm	7μm	8μm	30	30	6
4790-2000	200x130mm	8μm	9μm	34	34	7
4790-2500	250x165mm	9μm	10μm	35	35	7
4790-3000	300x200mm	10μm	11μm	40	40	8

## 90° TOOL MAKER SQUARES

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



4794-040



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

## 90° FLAT EDGE SQUARES

- Made of hardened stainless steel

### DIN875 grade 0 (mm)

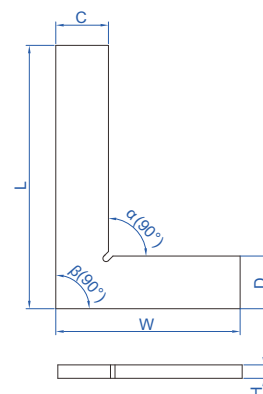
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-50	50x40mm	6μm	6μm	15	15	4
4791-75	75x50mm	6μm	7μm	15	15	4
4791-100	100x70mm	7μm	7μm	20	20	5
4791-150	150x100mm	7μm	8μm	30	30	6
4791-200	200x130mm	8μm	9μm	30	30	7
4791-250	250x165mm	9μm	10μm	35	35	7
4791-300	300x200mm	10μm	11μm	40	40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



4791-100

### DIN875 grade 1 (mm)

Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-501	50x40mm	12μm	13μm	15	15	4
4791-751	75x50mm	13μm	14μm	15	15	4
4791-1001	100x70mm	14μm	15μm	20	20	5
4791-1501	150x100mm	16μm	18μm	30	30	6
4791-2001	200x130mm	19μm	20μm	30	30	7
4791-2501	250x165mm	21μm	23μm	35	35	7
4791-3001	300x200mm	23μm	25μm	40	40	8



### DIN875 grade 2 (mm)

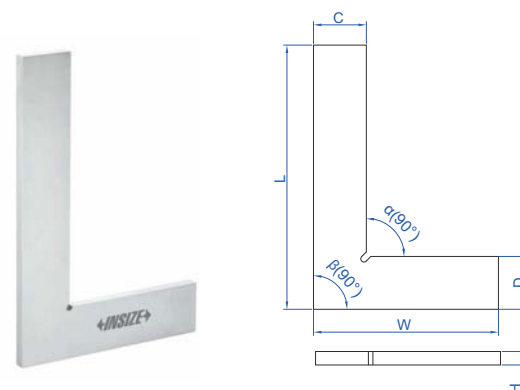
Code	Size (LxW)	Squareness		C	D	H
		Inside (α)	Outside (β)			
4791-502	50x40mm	24μm	25μm	15	15	4
4791-752	75x50mm	26μm	28μm	15	15	4
4791-1002	100x70mm	28μm	30μm	20	20	5
4791-1502	150x100mm	33μm	35μm	30	30	6
4791-2002	200x130mm	38μm	40μm	30	30	7
4791-2502	250x165mm	43μm	45μm	35	35	7
4791-3002	300x200mm	47μm	50μm	40	40	8

ATTENTION: NO ANTI-RUST  
TREATMENT, NOT HARDEND

## MACHINIST SQUARES (ECONOMIC TYPE)

- 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

## 90° FLAT EDGE SQUARES WITH WIDE BASE

- Made of hardened stainless steel

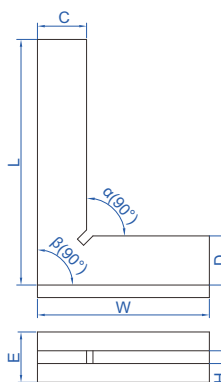
Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4793-50	50x40mm	6 $\mu$ m	6 $\mu$ m	15	15	4	13
4793-75	75x50mm	6 $\mu$ m	7 $\mu$ m	15	15	4	15
4793-100	100x70mm	7 $\mu$ m	7 $\mu$ m	20	20	5	20
4793-150	150x100mm	7 $\mu$ m	8 $\mu$ m	30	30	6	30
4793-200	200x130mm	8 $\mu$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

Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4793-501	50x40mm	12 $\mu$ m	13 $\mu$ m	15	15	4	13
4793-751	75x50mm	13 $\mu$ m	14 $\mu$ m	15	15	4	15
4793-1001	100x70mm	14 $\mu$ m	15 $\mu$ m	20	20	5	20
4793-1501	150x100mm	16 $\mu$ m	18 $\mu$ m	30	30	6	30
4793-2001	200x130mm	19 $\mu$ m	20 $\mu$ m	30	30	7	30
4793-2501	250x165mm	21 $\mu$ m	23 $\mu$ m	35	35	7	35
4793-3001	300x200mm	23 $\mu$ m	25 $\mu$ m	40	40	8	40

Code	Size (LxW)	Squareness		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4793-502	50x40mm	24 $\mu$ m	25 $\mu$ m	15	15	4	13
4793-752	75x50mm	26 $\mu$ m	28 $\mu$ m	15	15	4	15
4793-1002	100x70mm	28 $\mu$ m	30 $\mu$ m	20	20	5	20
4793-1502	150x100mm	33 $\mu$ m	35 $\mu$ m	30	30	6	30
4793-2002	200x130mm	38 $\mu$ m	40 $\mu$ m	30	30	7	30
4793-2502	250x165mm	43 $\mu$ m	45 $\mu$ m	35	35	7	35
4793-3002	300x200mm	47 $\mu$ m	50 $\mu$ m	40	40	8	40

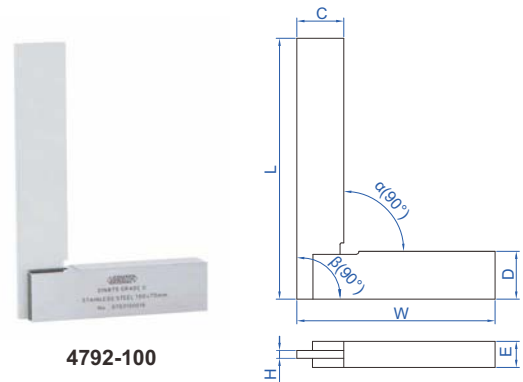


## 90° FLAT EDGE SQUARES WITH WIDE BASE

- 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

(mm)



4792-100

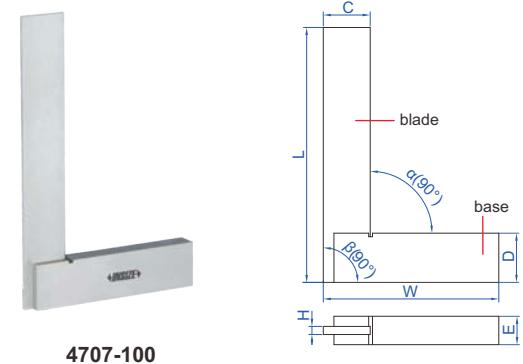
## MACHINIST SQUARES WITH WIDE BASE (ECONOMIC TYPE)

ATTENTION: NO ANTI-RUST TREATMENT, NOT HARDEND

- 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

(mm)



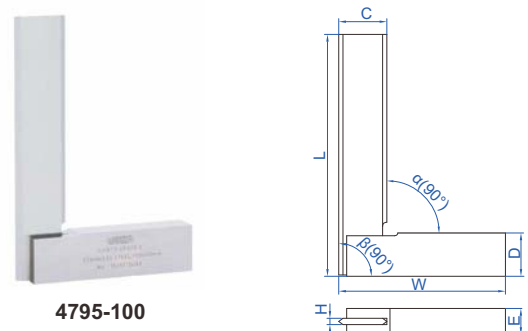
4707-100

## 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

(mm)



4795-100

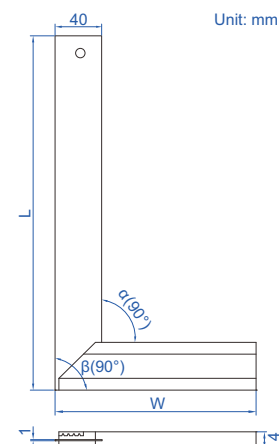
## TRY SQUARE

- Graduation: 1mm
- Stainless steel blade, aluminum base

Code	Size (LxW)	Squareness	
		Inside ( $\alpha$ )	Outside ( $\beta$ )
2275-300	300x170mm	0.5mm	0.5mm



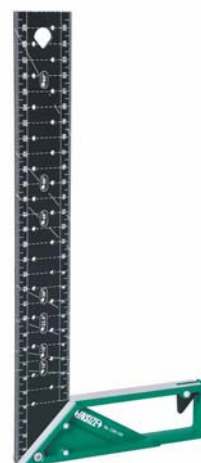
2275-300



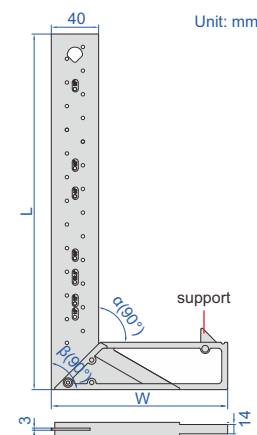
## TRY SQUARE

- Graduation: 1mm
- Aluminum blade and base
- 4 milled surfaces
- Retractable metal ledge support
- Etchings and holes for beveling and framing: 10°, 15°, 22.5°, 30°, 45°, 50° and 60°
- Etchings and holes every cm for fluid pencil marking

Code	Size (LxW)	Squareness	
		Inside ( $\alpha$ )	Outside ( $\beta$ )
2280-300	300x150mm	0.5mm	0.5mm

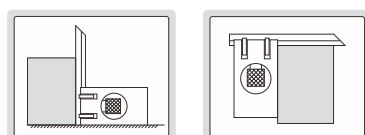


2280-300

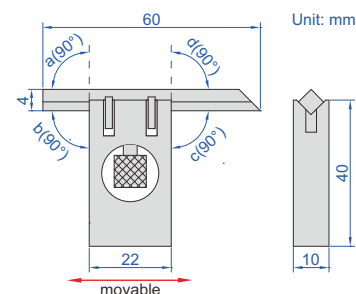


## ADJUSTABLE SQUARE

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



4701-1



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

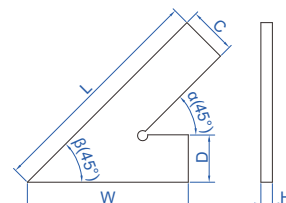
## 45° SQUARES

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4745-1120	120x80mm	29 $\mu$ m	32 $\mu$ m	20	20	5
4745-1150	150x100mm	32 $\mu$ m	35 $\mu$ m	20	20	5
4745-1200	200x130mm	36 $\mu$ m	40 $\mu$ m	25	25	5



4745-1120



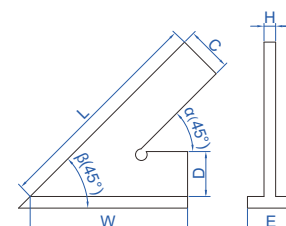
## 45° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4747-120	120x80mm	29 $\mu$ m	33 $\mu$ m	20	20	5	20
4747-150	150x100mm	32 $\mu$ m	36 $\mu$ m	20	20	5	20
4747-200	200x130mm	36 $\mu$ m	41 $\mu$ m	25	25	5	25



4747-120



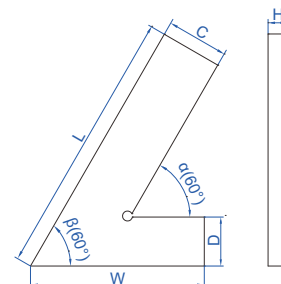
## 60° SQUARES

- Made of hardened stainless steel

Code	Size (LxW)	Accuracy		C	D	H
		Inside ( $\alpha$ )	Outside ( $\beta$ )			
4760-1120	120x80mm	30 $\mu$ m	32 $\mu$ m	20	20	5
4760-1150	150x100mm	32 $\mu$ m	35 $\mu$ m	20	20	5
4760-1200	200x130mm	37 $\mu$ m	40 $\mu$ m	25	25	5



4760-1120



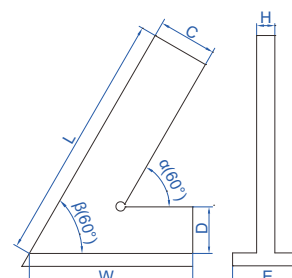
## 60° SQUARES WITH WIDE BASE

- Made of hardened stainless steel

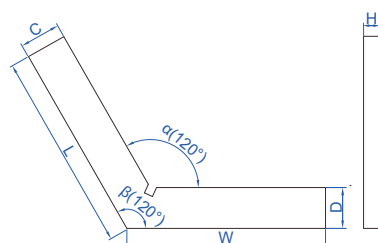
Code	Size (LxW)	Accuracy		C	D	H	E
		Inside ( $\alpha$ )	Outside ( $\beta$ )				
4762-120	120x80mm	30 $\mu$ m	33 $\mu$ m	20	20	5	20
4762-150	150x100mm	33 $\mu$ m	36 $\mu$ m	20	20	5	20
4762-200	200x130mm	37 $\mu$ m	41 $\mu$ m	25	25	5	25



4762-120







## 120° SQUARES

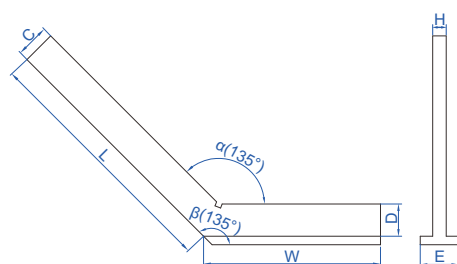
(mm)

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

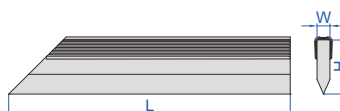
- Made of hardened stainless steel

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

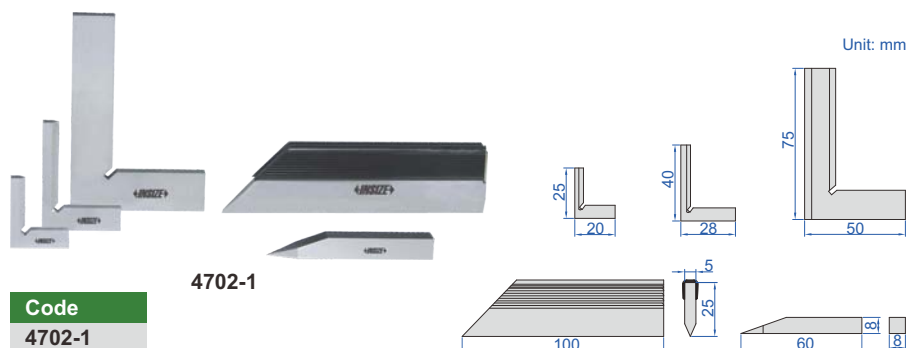
## STRAIGHT EDGES



4700-100



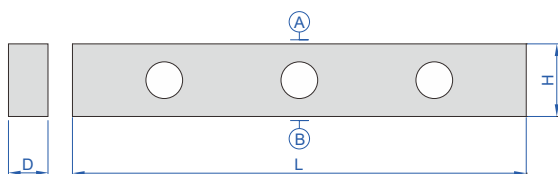
- DIN874
- Beveled edge
- Made of hardened stainless steel
- Satin chrome plating



## 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

## 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

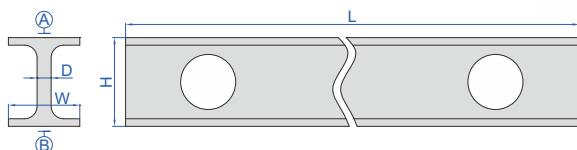
## MAGNALIUM STRAIGHT EDGES

LIGHT WEIGHT

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



4180-1500



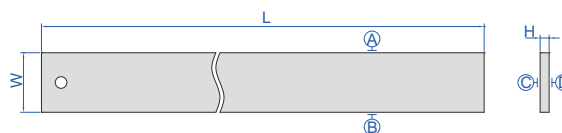
Code	Length (L)	Flatness of A and B	Parallelism between A and B	H	W	D	Weight
4180-500	500mm	3µm	4µm	60mm	30mm	5mm	1kg
4180-1000	1000mm	5µm	8µm	60mm	30mm	5mm	1.5kg
4180-1500	1500mm	15µm	22µm	100mm	40mm	7mm	4.5kg
4180-2000	2000mm	18µm	27µm	100mm	40mm	7mm	6kg
4180-2500	2500mm	22µm	33µm	100mm	40mm	7mm	7.5kg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

## PRECISION STRAIGHT EDGES

15

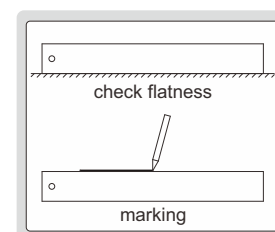


7117-300



- Check flatness and for marking
- Made of tool steel

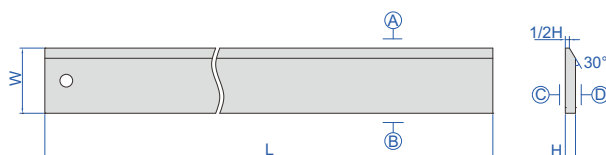
Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7117-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7117-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7117-900	914mm	0.007mm	0.06mm	64mm	9.5mm



## PRECISION STRAIGHT EDGES WITH BEVELED EDGE

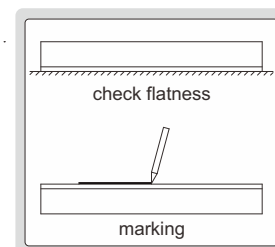


7118-300



- Check flatness and for marking
- Made of tool steel

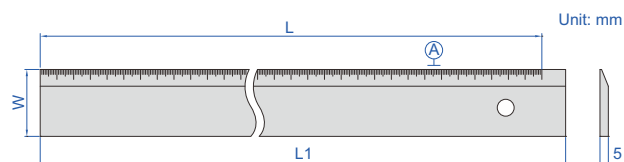
Code	Range (L)	Flatness of A and B	Flatness of C and D	W	H
7118-300	305mm	0.005mm	0.05mm	41mm	6.3mm
7118-600	610mm	0.006mm	0.06mm	51mm	7.9mm
7118-900	914mm	0.007mm	0.06mm	64mm	9.5mm



## STRAIGHT EDGES

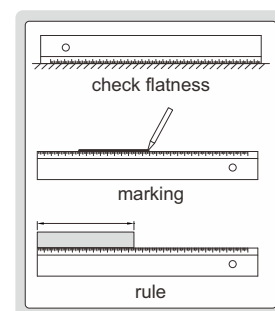


7111-300A



- Check flatness and straightness, as well as for marking
- Graduation on the beveled edge
- Made of hardened tool steel
- Chrome plated
- Graduation: 1mm

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



## 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

## STRAIGHTNESS/FLATNESS GAGE



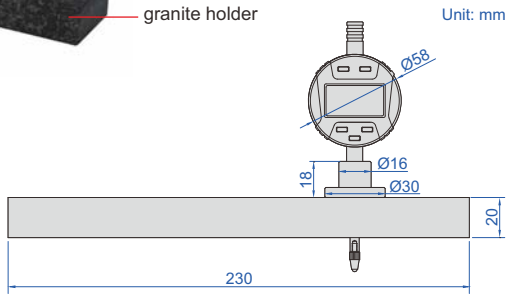
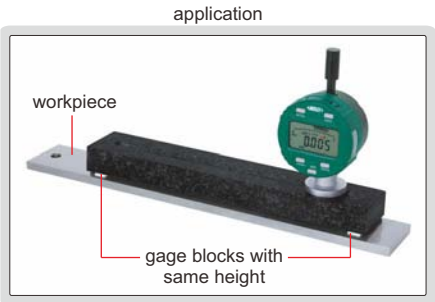
GRANITE HOLDER CAN BE CUSTOMIZED  
ACCORDING TO WORKPIECES

DATA  
OUTPUT

- Optional accessory: data output cable  
(code 7315-50M need receiver page 5,  
7302-40M page 13)



2144-200



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

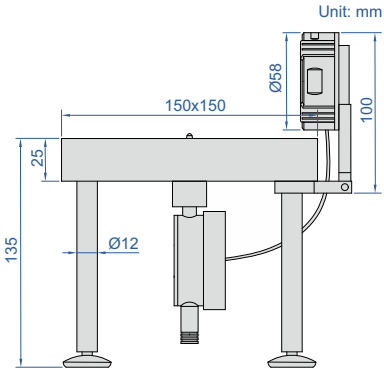
## FLATNESS MEASUREMENT STAND

DATA  
OUTPUT

GRANITE PLATE CAN BE CUSTOMIZED  
ACCORDING TO WORKPIECES



6852-150



Unit: mm

- Optional accessory: data output cable  
(code 7315-50M need receiver page 5,  
7302-40M page 13, 7305-40M page 9)

Code	Digital indicator resolution	Flatness measurement accuracy	Flatness of granite plate
6852-150	0.001mm/0.00005"	2µm	2µm

