

## BLOCK LEVEL

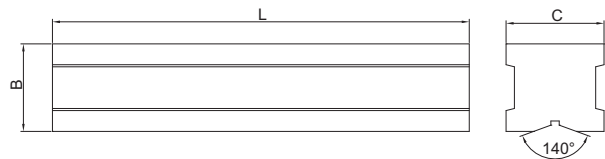


4903-200A

- V-groove on bottom for shafts
- With transverse vial
- Supplied with adjusting wrench

Code	Length(L)	Sensitivity	B	C
4903-150A	150mm	0.02mm/m	40	45
4903-200A	200mm	0.02mm/m	42	47
4903-300A	300mm	0.02mm/m	45	50

(mm)

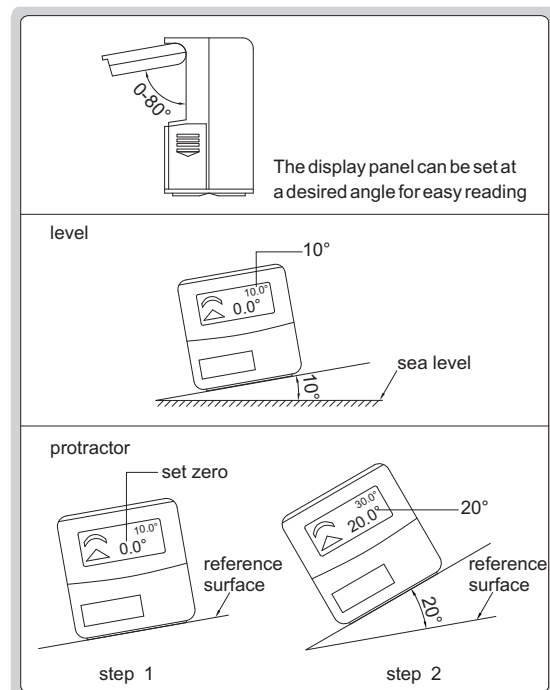
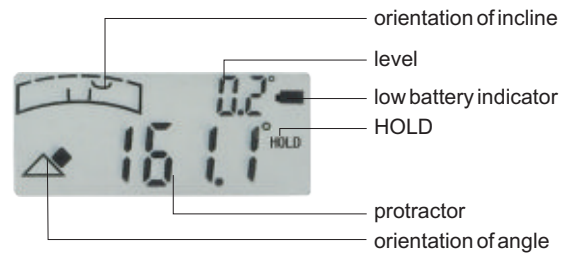
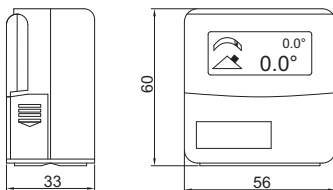


## DIGITAL LEVEL AND PROTRACTOR



2178-1

Unit: mm



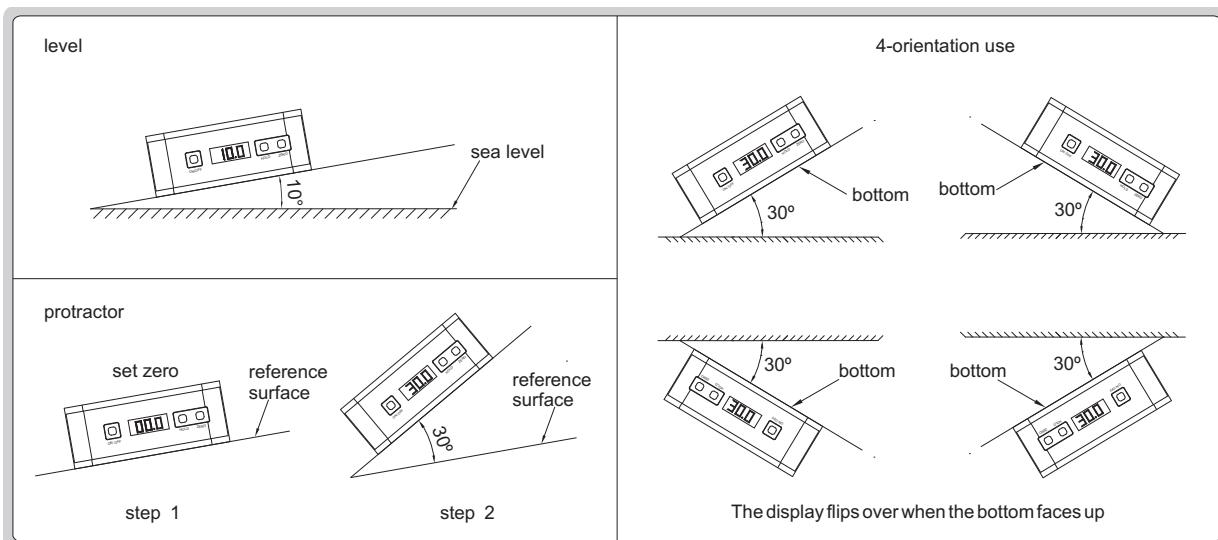
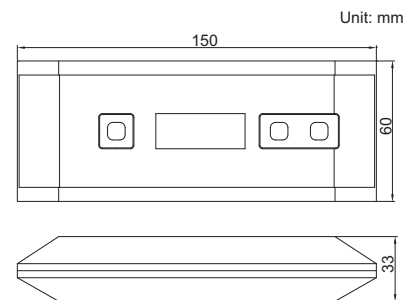
- Used as level and protractor
- The display panel can be set at a desired angle for easy reading
- Magnetic bottom with V-groove for shafts
- The sea level is permanently set inside the chip, zero setting is not needed when batteries are replaced
- Buttons: ON/ZERO, HOLD(keep the reading)
- Two AAA batteries
- Automatic power off

Code	Range	Resolution	Accuracy
2178-1	0 - 180°	0.1° (= 1.745 mm/m)	±0.1°

# DIGITAL LEVEL AND PROTRACTOR



2173-360



- Used as level and protractor
- Aluminum frame
- Magnetic bottom with V-groove for shafts
- Zero setting can be made on any plain surfaces
- Buttons: ON/OFF, ZERO, HOLD(keep the reading)
- CR2032 battery
- Automatic power off

Code	Range	Resolution	Accuracy
2173-360	0 - 360° (90°x4)	0.1° (= 1.745 mm/m)	±0.2°

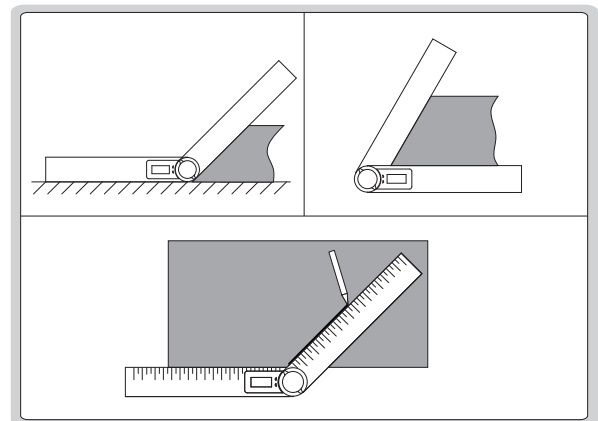
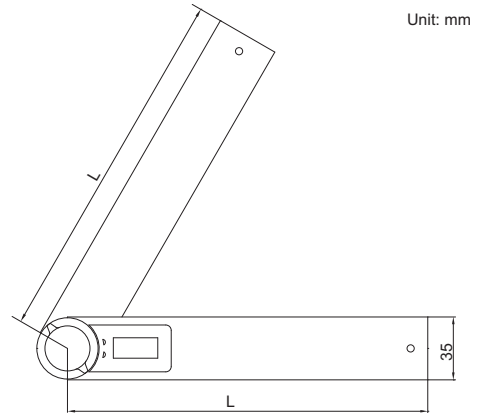
## DIGITAL PROTRACTOR



2176-300

- Buttons: ON/OFF, ZERO
- With clamping screw to lock the blades
- Graduation of blade: 1mm and 1/32"
- 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°



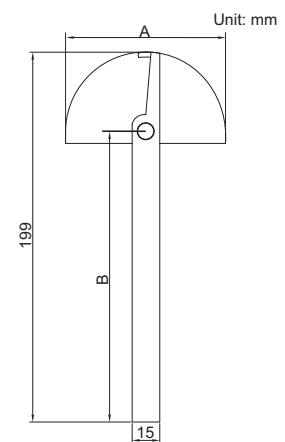
## PROTRACTOR



4780-85

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

Code	Size(AxB)	Range	Graduation	Accuracy
4780-85	85x150mm	0-180°	1°	±0.3°

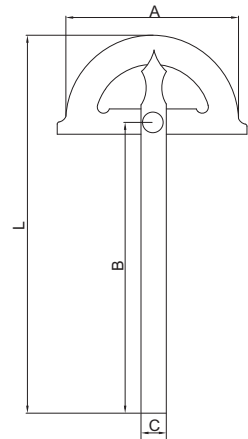


## PROTRACTOR



4799-180

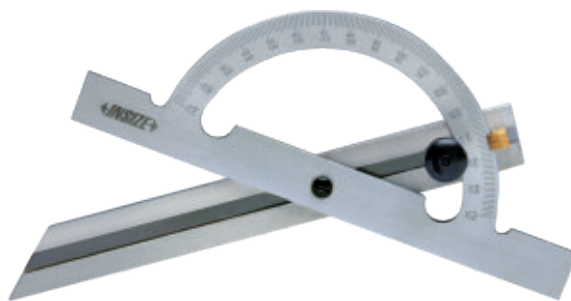
- Made of stainless steel
- Satin chrome plated scale
- With clamping screw



(mm)

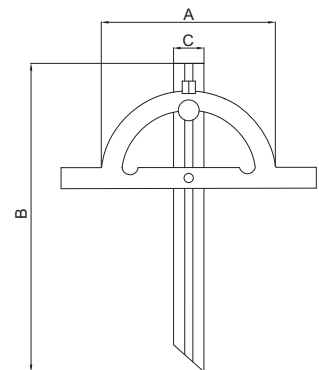
Code	Size(AxB)	Range	Graduation	Accuracy	L	C
4799-180	80x120mm	0 - 180°	1°	±0.3°	168	11
4799-1120	120x150mm	0 - 180°	1°	±0.3°	220	14
4799-1150	150x200mm	0 - 180°	1°	±0.3°	285	16
4799-1200	200x300mm	0 - 180°	1°	±0.3°	413	20
4799-1300	300x500mm	0 - 180°	1°	±0.3°	675	30

## PROTRACTOR



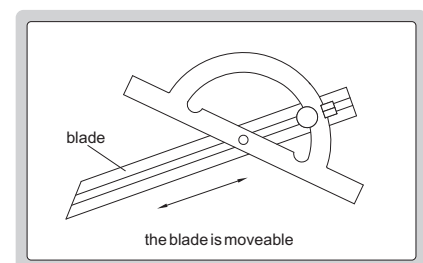
4797-100

- Made of stainless steel
- Satin chrome plated scale
- With clamping screw
- The blade is moveable

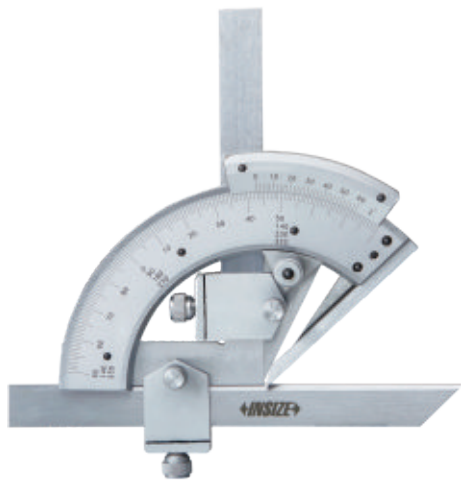


(mm)

Code	Size(AxB)	Range	Graduation	Accuracy	C
4797-100	100x150mm	10 - 170°	1°	±0.3°	18
4797-150	150x300mm	10 - 170°	1°	±0.3°	18
4797-200	200x400mm	10 - 170°	1°	±0.3°	20
4797-250	250x500mm	10 - 170°	1°	±0.3°	20
4797-300	300x600mm	10 - 170°	1°	±0.3°	20



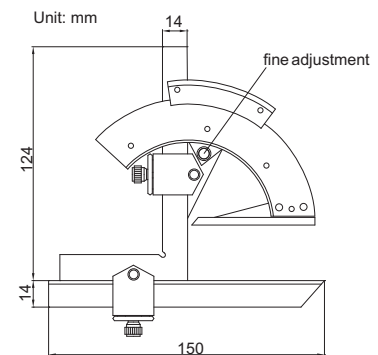
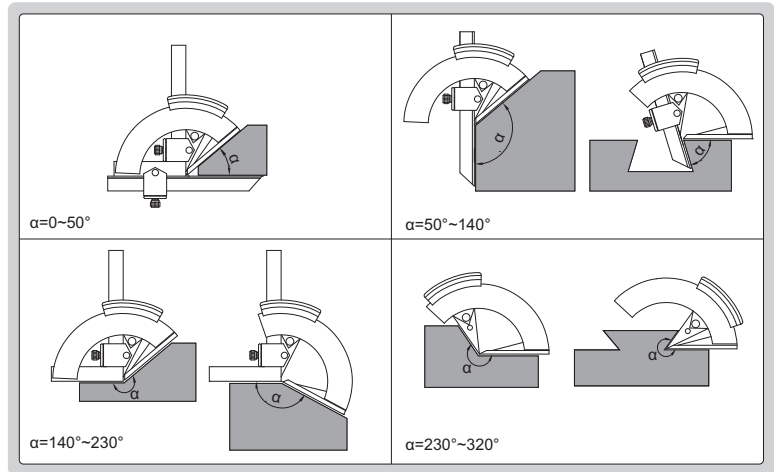
# PROTRACTOR



2374-320

- Made of carbon steel
- Satin chrome plated

Code	Range	Graduation	Accuracy
2374-320	0 - 320°	2'	±2'



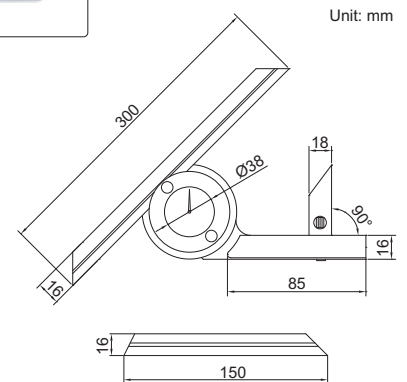
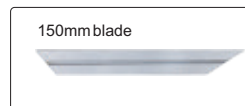
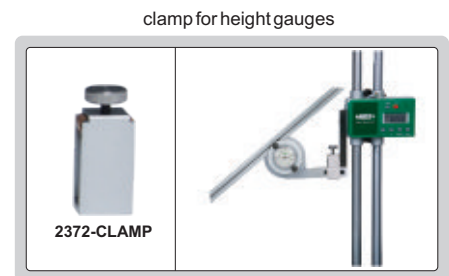
# DIAL PROTRACTOR



2373-360

- Supplied with 150mm blade
- Made of carbon steel
- Optional accessory: clamp (code 2372-CLAMP) suitable for height gauges 1151 and 1351

Code	Range	Graduation	Accuracy
2373-360	0 - 360°	5'	±5'



## UNIVERSAL PROTRACTOR

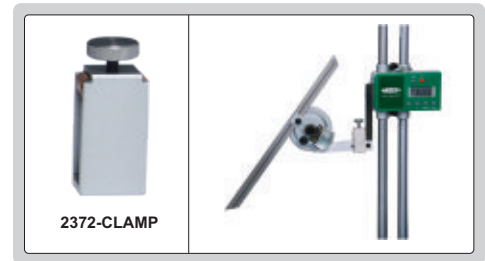


2372-360

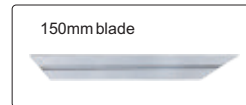
- Parallax-free reading
- Supplied with 150mm blade
- Made of carbon steel
- Optional accessory: clamp (code **2372-CLAMP**) suitable for height gauges **1151** and **1351**

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

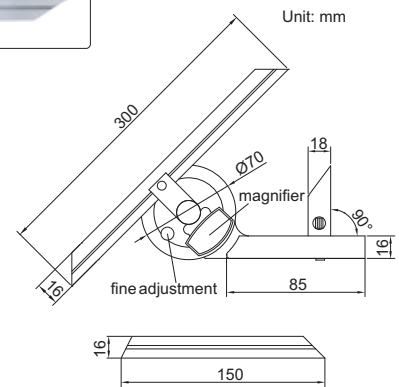
clamp for height gauges



2372-CLAMP



150mm blade



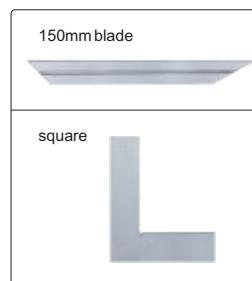
Unit: mm

## DIGITAL PROTRACTOR



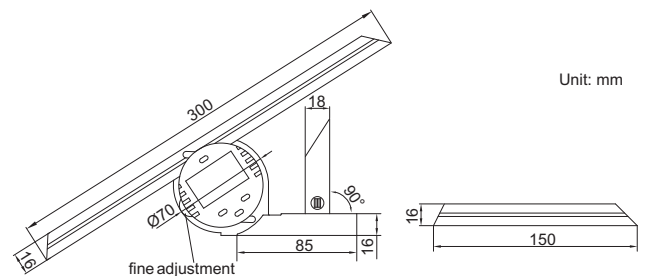
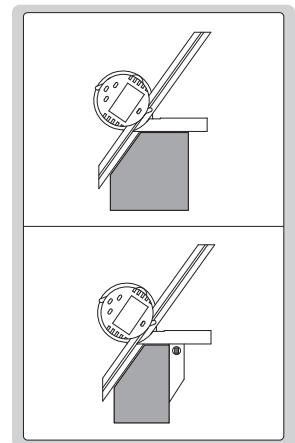
2172-360

- Display in degree (for example 32.658°) and degree/minute/second (for example 32°39'30")
- PRESET button: preset the reading
- MODE button: choose 0-90°, 0-180° or 0-360° display
- ZERO/ON button: zero and power on
- +/- button: change measuring direction
- Battery CR2032, automatic power off
- Supplied with 150mm blade and square to set 90°
- Made of stainless steel



150mm blade

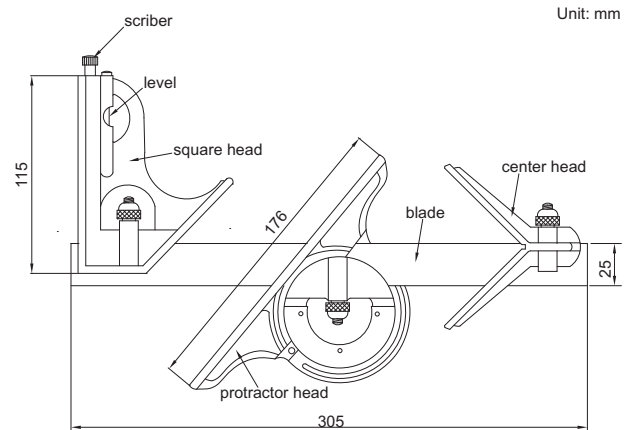
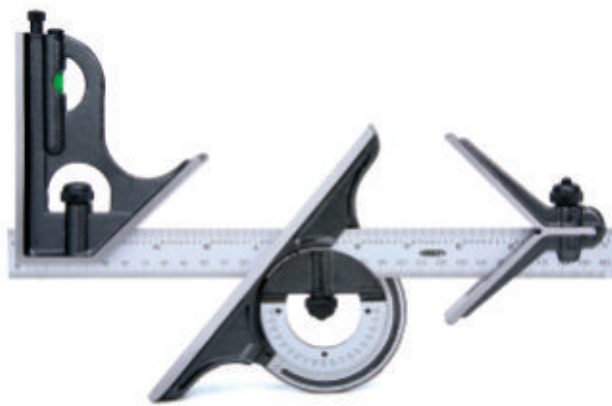
square



Unit: mm

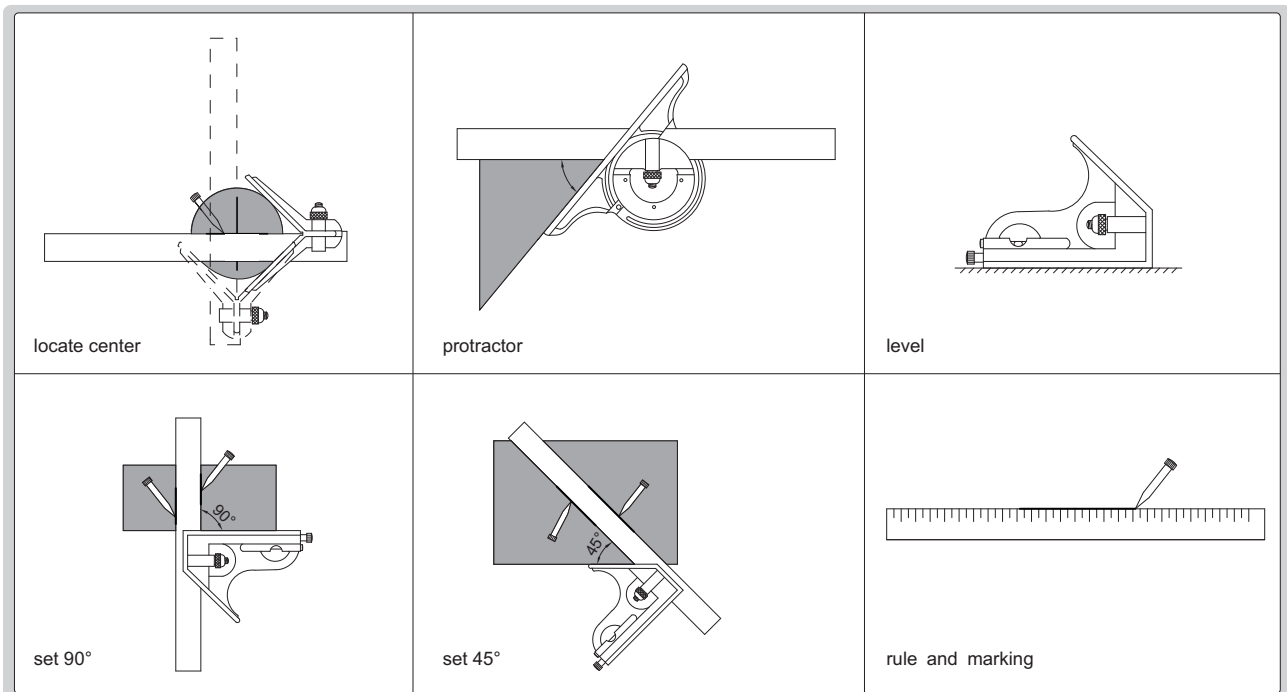
Code	Range	Resolution	Accuracy
2172-360	0 - 360°	30"/0.001°	±5'

## COMBINATION SQUARE SET



Unit: mm

2278-180



### Code

2278-180

- Center head:  
To locate center of round workpieces  
Accuracy:  $\pm 0.15\text{mm}$
- Protractor head:  
To set the blade at desired angle to an edge of a workpiece, and can be used to measure angles  
Range: 0-180°  
Accuracy:  $\pm 7\text{min}$ .
- Square head:  
To set the blade at 90° or 45° to an edge of a workpiece  
Accuracy:  $\pm 8\text{min}$  for 90° square,  $\pm 10\text{min}$  for 45° square
- Blade:  
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)

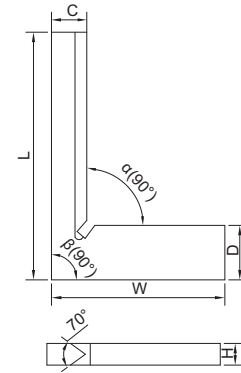
## 90° TOOL MAKER SQUARE



4794-040

(mm)

Code	Size(LxW)	Squareness		C	D	H
		Inside( $\alpha$ )	Outside( $\beta$ )			
4794-025	25x20mm	2.2 $\mu$ m	2.3 $\mu$ m	4	6.5	3.5
4794-040	40x28mm	2.3 $\mu$ m	2.4 $\mu$ m	5.5	8.5	3.5



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

## 90° BEVELED EDGE SQUARE

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

DIN875 grade 00

(mm)

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

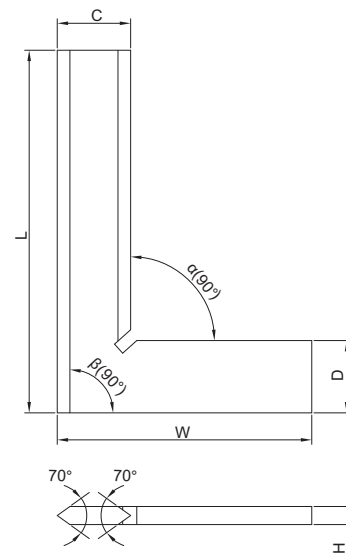
DIN875 grade 0

(mm)

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



4790-0100





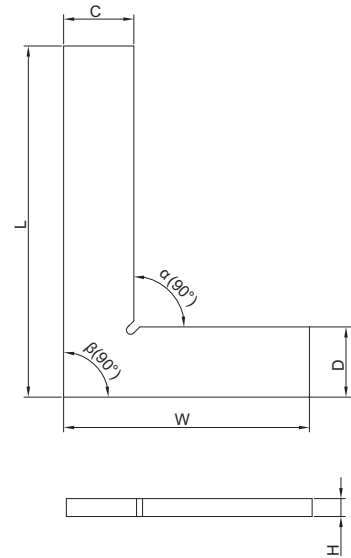
## 90° FLAT EDGE SQUARE



4791-100

(mm)

Code	Size(LxW)	Squareness		C	D	H
		Inside( $\alpha$ )	Outside( $\beta$ )			
4791-50	50x40mm	6 $\mu$ m	6 $\mu$ m	13	13	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 0
- Made of hardened stainless steel

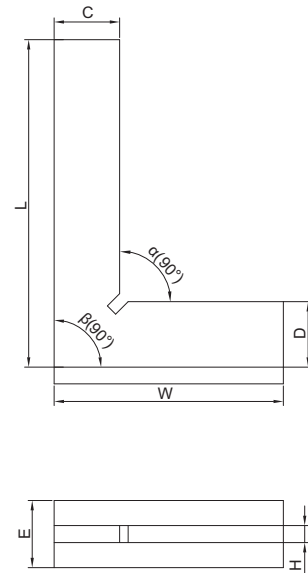
## 90° FLAT EDGE SQUARE WITH WIDE BASE



4793-100

(mm)

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

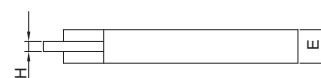
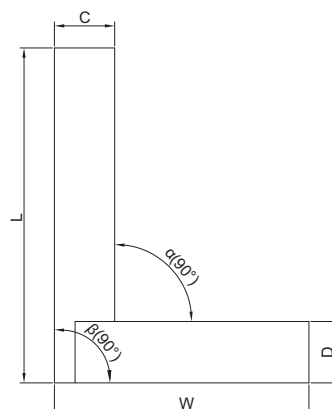


- DIN875 grade 0
- Made of hardened stainless steel

## 90° FLAT EDGE SQUARE WITH WIDE BASE



4792-100



(mm)

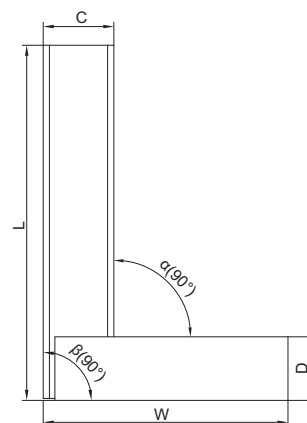
Code	Size(LxW)	Squareness		C	D	H	E
		Inside( $\alpha$ )	Outside( $\beta$ )				
4792-50	50x40mm	6 $\mu$ m	6 $\mu$ m	12	12	3	10
4792-75	75x50mm	6 $\mu$ m	7 $\mu$ m	14	14	3	10
4792-100	100x70mm	7 $\mu$ m	7 $\mu$ m	18	18	3	10
4792-150	150x100mm	8 $\mu$ m	8 $\mu$ m	22	22	4	12
4792-200	200x130mm	9 $\mu$ m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

- DIN875 grade 0
- Made of hardened stainless steel

## 90° BEVELED EDGE SQUARE WITH WIDE BASE



4795-100



(mm)

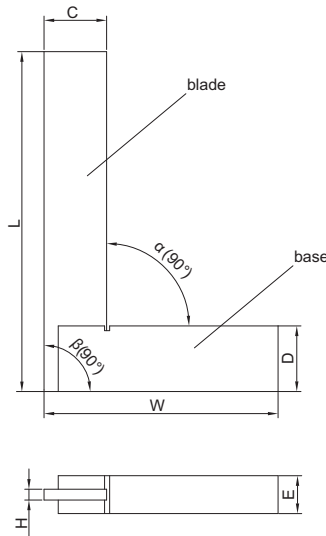
Code	Size(LxW)	Squareness		C	D	H	E
		Inside( $\alpha$ )	Outside( $\beta$ )				
4795-50	50x40mm	6 $\mu$ m	6 $\mu$ m	12	12	3	10
4795-75	75x50mm	6 $\mu$ m	7 $\mu$ m	14	14	3	10
4795-100	100x70mm	7 $\mu$ m	7 $\mu$ m	18	18	3	10
4795-150	150x100mm	8 $\mu$ m	8 $\mu$ m	22	22	4	12
4795-200	200x130mm	9 $\mu$ m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

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

# MACHINIST SQUARE WITH WIDE BASE



4707-100



Size(LxW)	C	D	H	E
50x40mm	16	12	3	9
75x50mm	16	16	3	9
100x70mm	19	19	3	12
150x100mm	25	25	3	16
200x130mm	30	32	4	16
250x165mm	30	32	4	19
300x200mm	32	32	4	19
400x250mm	38	38	5	22
500x300mm	45	50	6	25
600x350mm	50	50	6	30
750x400mm	55	55	6	50
900x500mm	65	75	9	50
1000x550mm	65	75	9	50

- Made of carbon steel
- Base is not hardened

## DIN875 grade 1, blade is hardened

### Individual

Code	Size(LxW)	Squareness	
		Inside( $\alpha$ )	Outside( $\beta$ )
4707-151	50x40mm	12 $\mu$ m	13 $\mu$ m
4707-175	75x50mm	13 $\mu$ m	14 $\mu$ m
4707-1100	100x70mm	14 $\mu$ m	15 $\mu$ m
4707-1150	150x100mm	16 $\mu$ m	18 $\mu$ m
4707-1200	200x130mm	18 $\mu$ m	20 $\mu$ m
4707-1250	250x165mm	21 $\mu$ m	23 $\mu$ m
4707-1300	300x200mm	23 $\mu$ m	25 $\mu$ m
4707-1400	400x250mm	28 $\mu$ m	30 $\mu$ m
4707-1500	500x300mm	33 $\mu$ m	35 $\mu$ m
4707-1600	600x350mm	38 $\mu$ m	40 $\mu$ m
4707-1750	750x400mm	45 $\mu$ m	48 $\mu$ m
4707-1900	900x500mm	51 $\mu$ m	55 $\mu$ m
4707-11000	1000x550mm	56 $\mu$ m	60 $\mu$ m

### Set

Code	Squares included
4707-1S2	50x40mm (4707-151), 75x50mm (4707-175), 100x70mm (4707-1100), 150x100mm (4707-1150)
4707-1S3	100x70mm (4707-1100), 150x100mm (4707-1150), 200x130mm (4707-1200), 300x200mm (4707-1300)

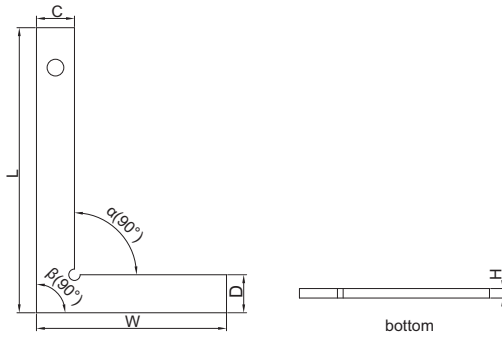
## DIN875 grade 2, blade is not hardened

### Individual

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

### Set

Code	Squares included
4707-2S2	50x40mm (4707-50), 75x50mm (4707-75), 100x70mm (4707-100), 150x100mm (4707-150)
4707-2S3	100x70mm (4707-100), 150x100mm (4707-150), 200x130mm (4707-200), 300x200mm (4707-300)



## MACHINIST SQUARE

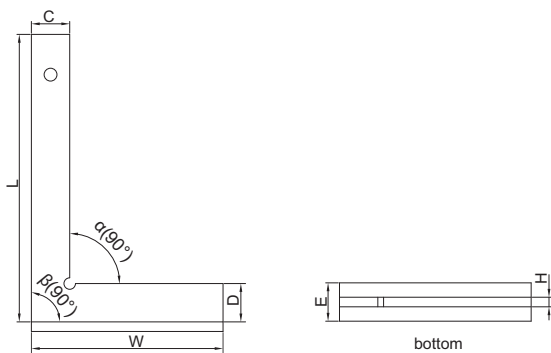


4703-150

- Made of carbon steel
- Galvanized

(mm)

Code	Size(LxW)	Squareness		C	D	H
		Inside( $\alpha$ )	Outside( $\beta$ )			
4703-100	100x70mm	0.15mm	0.15mm	20	20	5
4703-150	150x100mm	0.20mm	0.20mm	20	20	5
4703-200	200x130mm	0.25mm	0.25mm	20	20	5
4703-250	250x160mm	0.30mm	0.30mm	25	25	5
4703-300	300x180mm	0.30mm	0.30mm	25	25	5
4703-400	400x230mm	0.35mm	0.35mm	30	30	6
4703-500	500x280mm	0.35mm	0.35mm	30	30	6
4703-600	600x330mm	0.40mm	0.40mm	30	30	6
4703-750	750x375mm	0.45mm	0.45mm	30	30	6
4703-1000	1000x500mm	0.50mm	0.50mm	30	30	6



## MACHINIST SQUARE WITH WIDE BASE



4704-150

- Made of carbon steel
- Galvanized

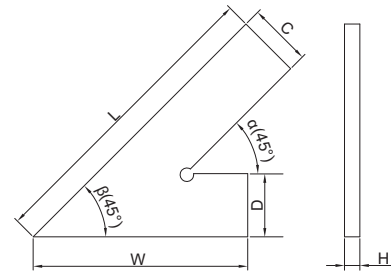
(mm)

Code	Size(LxW)	Squareness		C	D	H	E
		Inside( $\alpha$ )	Outside( $\beta$ )				
4704-100	100x70mm	0.15mm	0.15mm	20	20	5	20
4704-150	150x100mm	0.20mm	0.20mm	20	20	5	20
4704-200	200x130mm	0.25mm	0.25mm	20	20	5	25
4704-250	250x160mm	0.30mm	0.30mm	25	25	5	25
4704-300	300x180mm	0.30mm	0.30mm	25	25	5	30
4704-400	400x230mm	0.35mm	0.35mm	30	30	6	30
4704-500	500x280mm	0.35mm	0.35mm	30	30	6	30
4704-600	600x330mm	0.40mm	0.40mm	30	30	6	30
4704-750	750x375mm	0.45mm	0.45mm	30	30	6	30
4704-1000	1000x500mm	0.50mm	0.50mm	30	30	6	30

## 45° SQUARE



4745-1100



(mm)

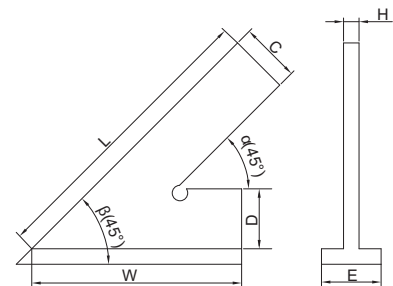
Code	Size(LxW)	Accuracy		C	D	H
		Inside( $\alpha$ )	Outside( $\beta$ )			
4745-1100	100x70mm	27 $\mu$ m	30 $\mu$ m	20	20	5
4745-1120	120x80mm	29 $\mu$ m	32 $\mu$ m	20	20	5
4745-1150	150x100mm	32 $\mu$ m	35 $\mu$ m	20	20	5
4745-1200	200x130mm	36 $\mu$ m	40 $\mu$ m	25	25	5

- Made of hardened stainless steel

## 45° SQUARE WITH WIDE BASE



4747-100



(mm)

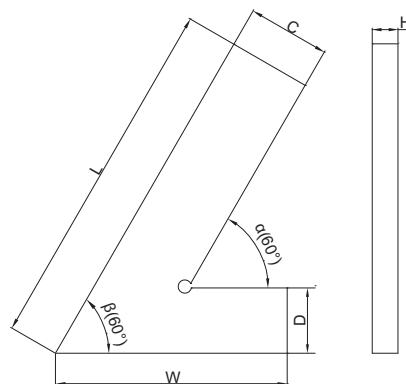
Code	Size(LxW)	Accuracy		C	D	H	E
		Inside( $\alpha$ )	Outside( $\beta$ )				
4747-100	100x70mm	27 $\mu$ m	31 $\mu$ m	20	20	5	20
4747-120	120x80mm	29 $\mu$ m	33 $\mu$ m	20	20	5	20
4747-150	150x100mm	32 $\mu$ m	36 $\mu$ m	20	20	5	20
4747-200	200x130mm	36 $\mu$ m	41 $\mu$ m	25	25	5	25

- Made of hardened stainless steel

## 60° SQUARE



4760-1100



Code	Size(LxW)	Accuracy		C	D	H	
		Inside( $\alpha$ )	Outside( $\beta$ )				
4760-1100	100x70mm	28 $\mu$ m	30 $\mu$ m	20	20	5	
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	

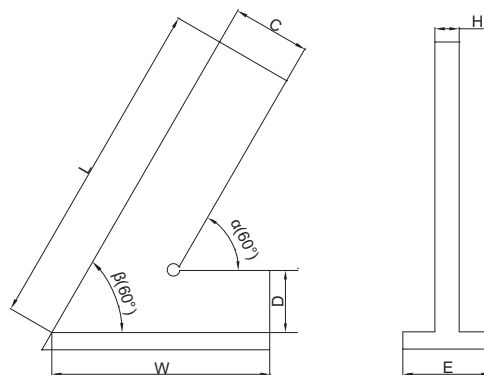
(mm)

■ Made of hardened stainless steel

## 60° SQUARE WITH WIDE BASE



4762-100



Code	Size(LxW)	Accuracy		C	D	H	E
		Inside( $\alpha$ )	Outside( $\beta$ )				
4762-100	100x70mm	28 $\mu$ m	31 $\mu$ m	20	20	5	20
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

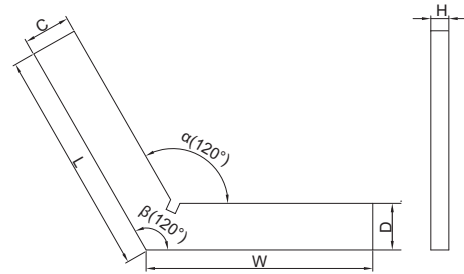
(mm)

■ Made of hardened stainless steel

## 120° SQUARE



4706-1100



(mm)

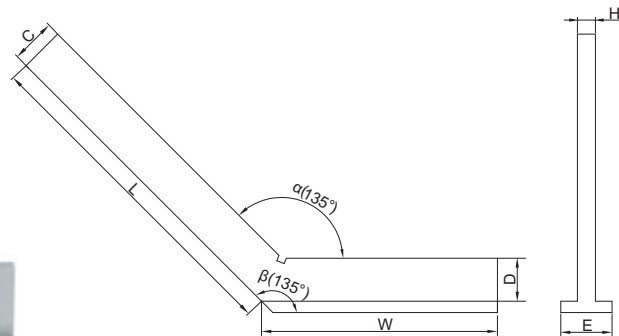
Code	Size(LxW)	Accuracy		C	D	H
		Inside( $\alpha$ )	Outside( $\beta$ )			
4706-150	50x50mm	24 $\mu$ m	25 $\mu$ m	15	15	5
4706-175	75x75mm	26 $\mu$ m	28 $\mu$ m	20	20	5
4706-1100	100x100mm	29 $\mu$ m	30 $\mu$ m	20	20	5
4706-1150	150x150mm	34 $\mu$ m	35 $\mu$ m	25	25	5
4706-1200	200x200mm	38 $\mu$ m	40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

■ Made of hardened stainless steel

## 135° SQUARE WITH WIDE BASE



4754-3120



(mm)

Code	Size(LxW)	Accuracy		C	D	H	E
		Inside( $\alpha$ )	Outside( $\beta$ )				
4754-3100	100x70mm	29 $\mu$ m	31 $\mu$ m	20	20	5	20
4754-3120	120x80mm	31 $\mu$ m	33 $\mu$ m	20	20	5	20
4754-3150	150x100mm	34 $\mu$ m	36 $\mu$ m	20	20	5	20
4754-3200	200x130mm	39 $\mu$ m	41 $\mu$ m	30	30	7	30
4754-3250	250x165mm	44 $\mu$ m	46 $\mu$ m	30	30	7	30
4754-3300	300x175mm	49 $\mu$ m	51 $\mu$ m	35	35	7	35

■ Made of hardened stainless steel

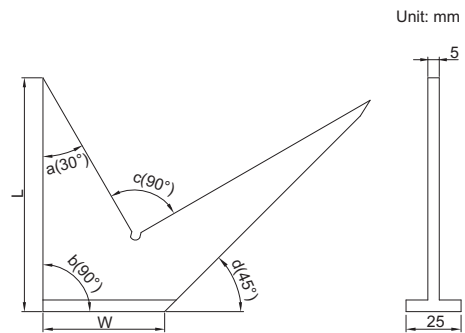
## SPECIAL SQUARE



4709-92

- Made of hardened carbon steel

Code	Size(LxW)	Accuracy			
		a	b	c	d
4709-92	92x47mm	27μm	29μm	29μm	30μm
4709-110	110x59mm	29μm	31μm	31μm	33μm
4709-130	130x70mm	30μm	33μm	33μm	35μm
4709-175	175x94mm	34μm	38μm	38μm	40μm



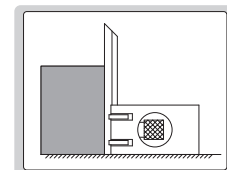
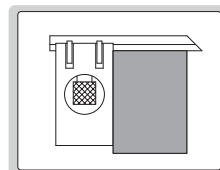
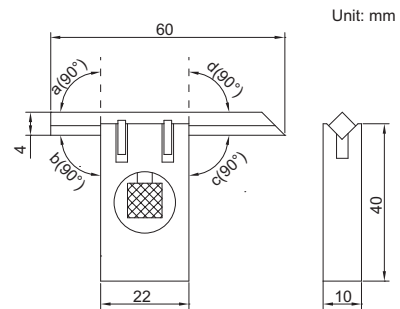
## ADJUSTABLE SQUARE



4701-1

- 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





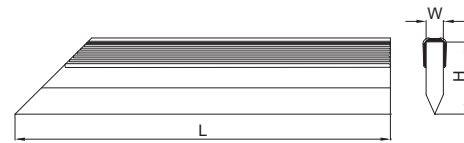
## STRAIGHT EDGE

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

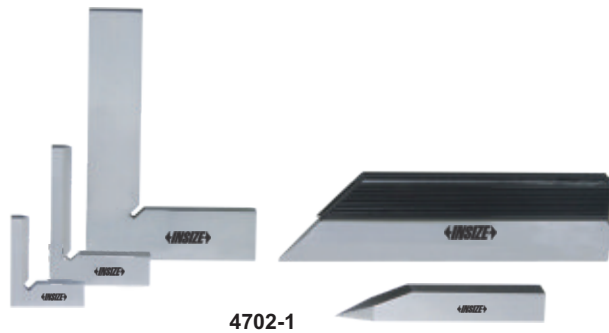
(mm)				
Code	Size (L)	Straightness	W	H
4700-50	50mm	2.2 $\mu$ m	5	20
4700-75	75mm	2.3 $\mu$ m	5	25
4700-100	100mm	2.4 $\mu$ m	5	25
4700-125	125mm	2.5 $\mu$ m	5	25
4700-150	150mm	2.6 $\mu$ m	6	30
4700-200	200mm	2.8 $\mu$ m	6	30
4700-250	250mm	3.0 $\mu$ m	8	40
4700-300	300mm	3.2 $\mu$ m	8	40
4700-400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



4700-100

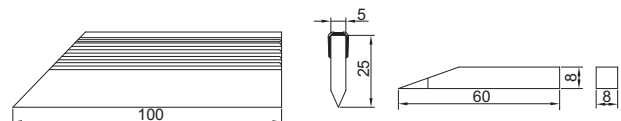
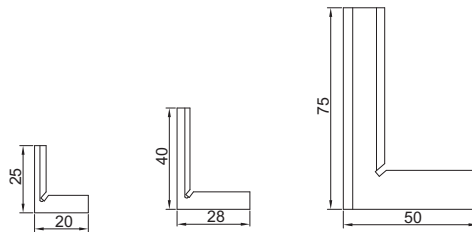


## SQUARE SET



4702-1

Unit: mm



- 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

Code

4702-1