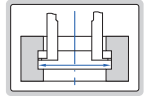
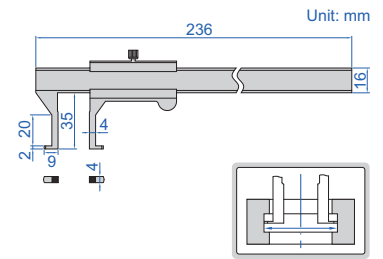


INSIDE GROOVE VERNIER CALIPER

- Measure diameter of grooves inside bores
- Made of stainless steel
- Satin chrome plated reading surface

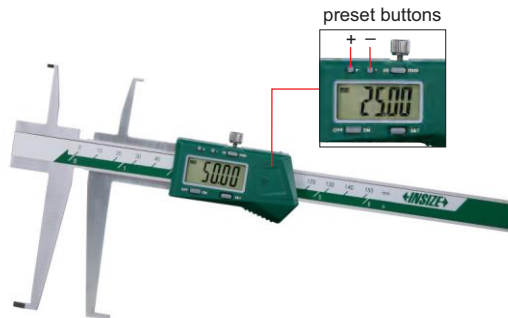


1262-150A



Code	Range	Graduation	Accuracy
1262-150A	18-150mm	0.02mm	±0.04mm

DIGITAL INSIDE GROOVE CALIPERS



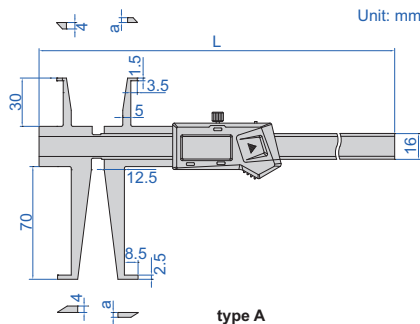
1176-150



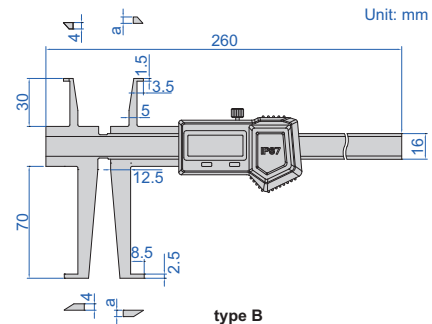
1176-150P



depth stop 6143 (optional)



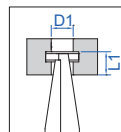
type A



type B

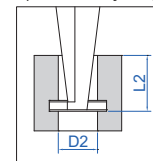
- Measure diameter of grooves inside bores
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, set, mm/inch, preset (+, -)
type B: on/off, zero, mm/inch, ABS/REL, hold
- Battery CR2032
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

sizes to be measured (use upper jaws)



D1	L1
Ø9	<8
Ø10	<15
Ø11~200	<30

sizes to be measured (use lower jaws)



(mm)	
D2	L2
Ø17	<16
Ø18	<28
Ø19	<40
Ø20	<50
Ø21	<58
Ø22~200	<70

Non waterproof, with data interface

(optional data output cable: code 7315-25 receiver is needed page 5, 7214-25 page 11, 7302-21 page 20)

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150	9-150mm/0.35-6"	17-150mm/0.70-6"	A	±0.04mm	260mm	3mm
1176-200	9-200mm/0.35-8"	17-200mm/0.70-8"	A	±0.05mm	320mm	3.5mm

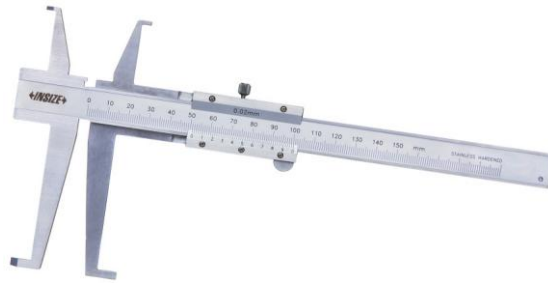
Non waterproof, built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	L	a
1176-150WL	9-150mm/0.35-6"	17-150mm/0.70-6"	A	±0.04mm	260mm	3mm
1176-200WL	9-200mm/0.35-8"	17-200mm/0.70-8"	A	±0.05mm	320mm	3.5mm

IP67 dust/waterproof, without data interface, no automatic power off, set zero after power on each time

Code	Range of upper jaw	Range of lower jaw	Type	Accuracy	a
1176-150P	9-150mm/0.35-6"	17-150mm/0.70-6"	B	±0.04mm	4mm

INSIDE GROOVE CALIPERS



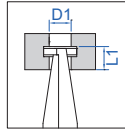
1199-150

depth stop 6143
(optional)



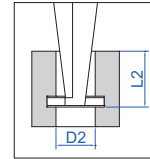
- Measure diameter of grooves inside bores
- Graduation: 0.02mm
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

sizes to be measured
(use upper jaws)



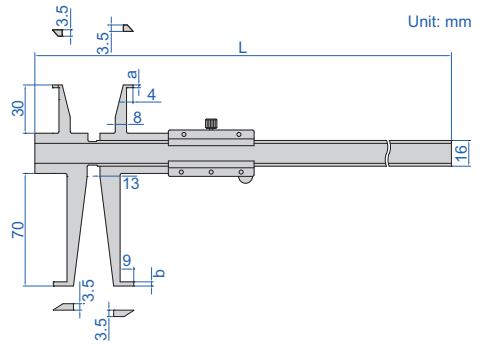
(mm)	
D1	L1
Ø9	<8
Ø10	<12
Ø11	<15
Ø12	<20
Ø13-300	<30

sizes to be measured
(use lower jaws)



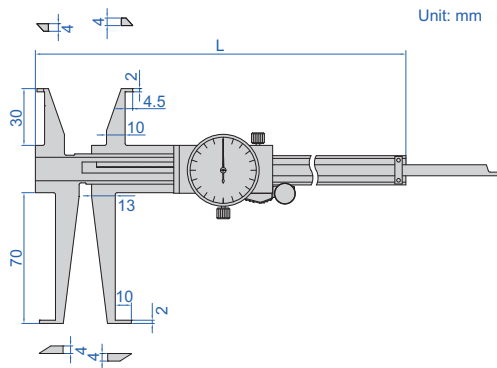
(mm)	
D2	L2
Ø18	<30
Ø19	<40
Ø20	<45
Ø21	<55
Ø22	<60
Ø23-300	<70

Code	Range of upper jaw	Range of lower jaw	Accuracy	L	a	b
1199-150	9-150mm	18-150mm	±0.04mm	248mm	1.6mm	2.5mm
1199-200	9-200mm	18-200mm	±0.05mm	298mm	1.8mm	2.8mm
1199-300	9-300mm	18-300mm	±0.06mm	398mm	2.0mm	3.0mm



INSIDE GROOVE DIAL CALIPERS

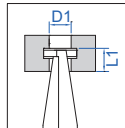
SHOCK PROOF



1376-150

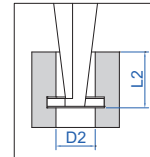
- Measure diameter of grooves inside bores
- Shockproof dial indicator
- Dial indicator graduation: 0.02mm
- Made of stainless steel
- Optional accessory: depth stop (code 6143)

sizes to be measured
(use upper jaws)



(mm)	
D1	L1
Ø11	<8
Ø12	<10
Ø13	<15
Ø14	<20
Ø15-300	<30

sizes to be measured
(use lower jaws)



(mm)	
D2	L2
Ø18	<20
Ø19	<28
Ø20	<35
Ø21	<40
Ø22	<50
Ø23-300	<70

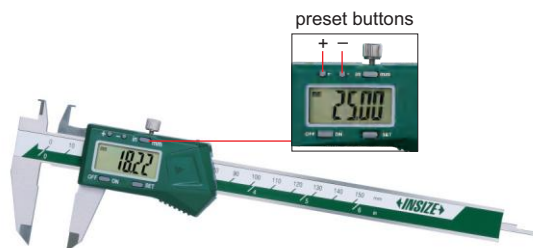
Code	Range of upper jaw	Range of lower jaw	Accuracy	L
1376-150	11-150mm	18-150mm	±0.03mm	240mm
1376-200	11-200mm	18-200mm	±0.03mm	290mm
1376-300	11-300mm	18-300mm	±0.04mm	390mm

DATA
OUTPUT

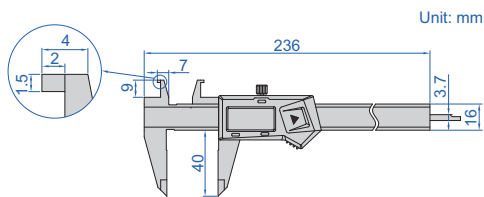
DIGITAL INSIDE GROOVE CALIPERS



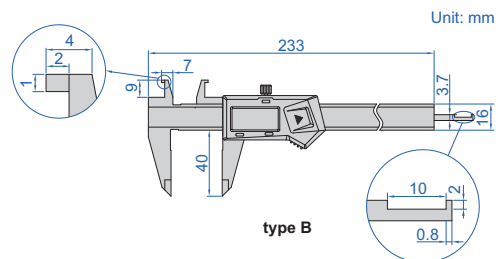
1191-150



1191-150B

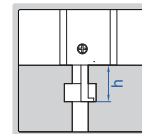
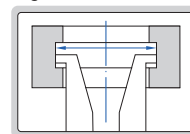


type A



type B

- Non waterproof
- Upper jaws for measuring diameter of grooves
- Resolution: 0.01mm/0.0005"
- Buttons type A: on/off, zero, mm/inch
type B: on/off, set, mm/inch, preset (+, -)
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

 measure depth of grooves
(h<10mm, only for type B)

 measure diameter of
grooves 8-150mm


With data interface

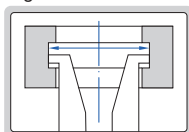
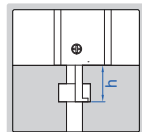
(optional data output cable: code 7315-25 receiver is needed page 5, 7214-25 page 11, 7302-21 page 20)

Code	Range of upper jaw	Range of lower jaw	Accuracy	Type
1191-150	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	A
1191-150B	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	B

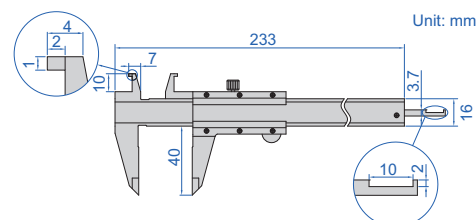
Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range of upper jaw	Range of lower jaw	Accuracy	Type
1191-150WL	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	A
1191-150BWL	8-150mm/0.3-6"	0-150mm/0-6"	±0.03mm	B

INSIDE GROOVE VERNIER CALIPER

 measure diameter of
grooves 8-150mm

 measure depth of
grooves (h<10mm)


1291-150



- Graduation: 0.02mm
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range of upper jaw	Range of lower jaw	Accuracy
1291-150	8-150mm	0-150mm	±0.03mm

DIGITAL V SHAPE CALIPER

DIRECT READING,
CALCULATION IS NOT REQUIRED

DATA
OUTPUT

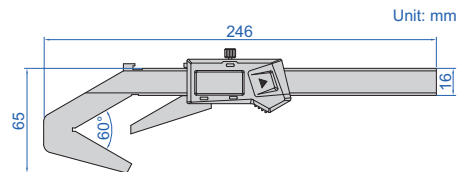
2



1539-3

- Non waterproof
- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory:
wireless transmitter code **7315-25** (receiver is needed) page 5,
bluetooth transmitter code **7214-25** page 11,
data output cable code **7302-21** page 20

Code	Range	Accuracy
1539-3	Ø4-Ø40mm/0.16"-1.58" DIA	±0.03mm



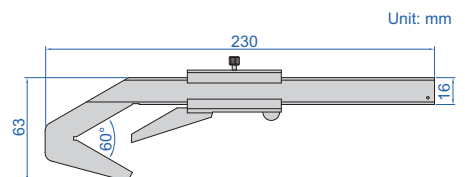
V SHAPE VERNIER CALIPER



1273-403

- Measure outside diameter of three number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface

Code	Range	Graduation	Accuracy
1273-403	Ø4-40mm	0.05mm	±0.05mm



DIRECT READING,
CALCULATION IS NOT REQUIRED

DATA
OUTPUT

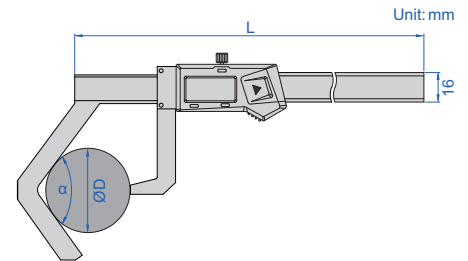
DIGITAL V TYPE CALIPERS

2



1529-5

- Non waterproof
- Measure the outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Resolution: 0.01mm/0.0005"
- Buttons: on/off, zero, mm/inch
- Battery CR2032
- Automatic power off, move the digital unit to turn on power
- Data output
- Made of stainless steel
- Optional accessory: Ø50mm calibration cylinder (code **6316-50**), wireless transmitter code **7315-25** (receiver is needed) page 5, bluetooth transmitter code **7214-25** page 11, data output cable code **7302-21** page 20



Ø50mm calibration cylinder
(code **6316-50**, optional)



Code	Range (ØD)	Flutes	Accuracy	Angle α	L
1529-3	Ø50-Ø200mm/2-8" DIA	3	±0.06mm	60°	390mm
1529-5	Ø50-Ø200mm/2-8" DIA	5	±0.06mm	108°	318mm
1529-19	Ø50-Ø200mm/2-8" DIA	19	±0.06mm	85°15'47"	336mm
1529-23	Ø50-Ø200mm/2-8" DIA	23	±0.06mm	70°26'5"	362mm
1529-31	Ø50-Ø200mm/2-8" DIA	31	±0.06mm	75°29'2"	355mm

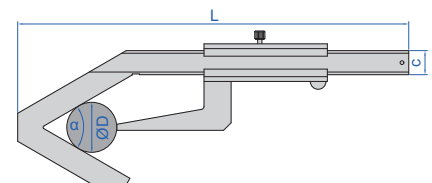
V SHAPE VERNIER CALIPERS

- Measure outside diameter of odd number of flutes (such as taps, reamers, end mills and gears)
- Made of stainless steel
- Satin chrome plated reading surface
- Optional accessory: 4mm pin gauge (code **4110-4D00**), Ø50mm calibration cylinder (code **6316-50**)



1229-3

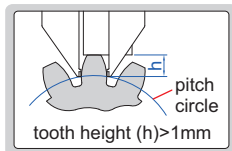
Code	Range (ØD)	Graduation	Accuracy	Flutes	Angle α	L	c
1229-3	Ø4-60mm	0.02mm	±0.04mm	3	60°	260mm	16mm
1229-35	Ø50-200mm	0.02mm	±0.06mm	3	60°	516mm	20mm
1229-5	Ø4-60mm	0.02mm	±0.04mm	5	108°	210mm	16mm
1229-55	Ø50-200mm	0.02mm	±0.06mm	5	108°	360mm	20mm



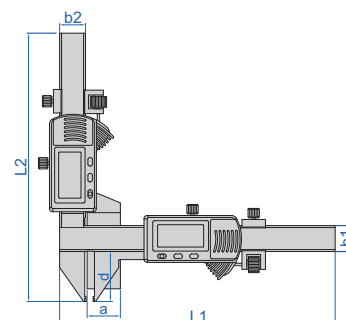
DIGITAL GEAR TOOTH CALIPERS

ATTENTION:
NO DATA OUTPUT

2



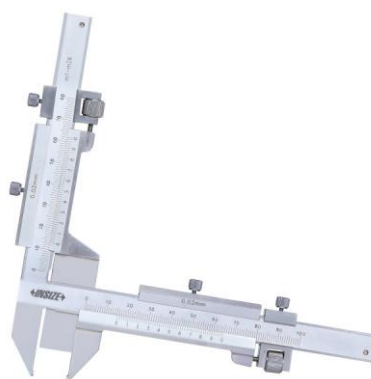
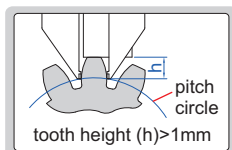
1181-M25A



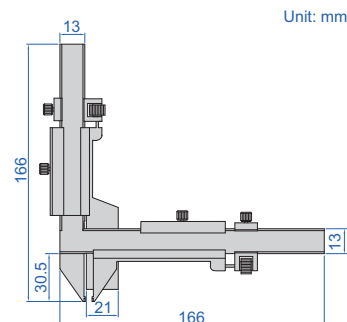
- Non waterproof
- Resolution: 0.01mm/0.0005"
- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > 1mm)
- Buttons: zero, on/off, mm/inch
- Automatic power off, move the digital unit to turn on power
- Battery CR2032
- Made of stainless steel

Code	Range	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy	L1	L2	a	b1	b2	d
1181-M25A	M1-25mm	±0.03mm	±0.03mm	±0.04mm	170mm	165.5mm	21mm	16mm	16mm	30.5mm
1181-M50A	M5-50mm	±0.03mm	±0.03mm	±0.04mm	220mm	190mm	50.5mm	16mm	16mm	55mm

GEAR TOOTH VERNIER CALIPER



1281-M26A

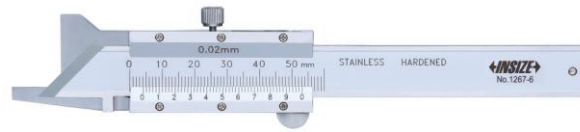


Unit: mm

- Carbide tips
- Measure the tooth thickness by positioning the tooth height (for tooth height > 1mm)
- Made of stainless steel
- Satin chrome plated reading surface

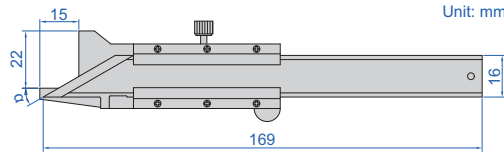
Code	Range	Graduation	Accuracy of height measurement	Accuracy of thickness measurement	Total accuracy
1281-M26A	M1-26mm	0.02mm	±0.03mm	±0.03mm	±0.04mm

CHAMFER GAUGES



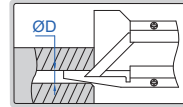
1267-6

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

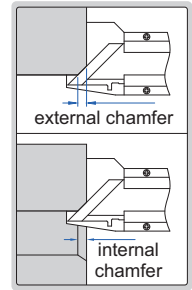


Code	Range	Accuracy	Chamfer (α)	$\varnothing D$
1267-6	0-10mm	$\pm 0.06\text{mm}$	45°	7mm
1267-63	0-10mm	$\pm 0.06\text{mm}$	30°	8mm
1267-66	0-10mm	$\pm 0.06\text{mm}$	60°	7mm

for internal chamfer measurement, diameter should be larger than $\varnothing D$



measure chamfer dimension



9

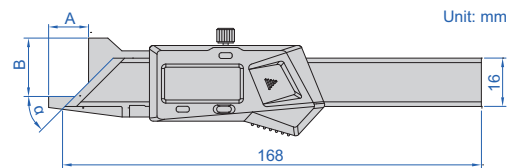
DIGITAL CHAMFER GAUGES

DATA OUTPUT



1180-6

- Non waterproof
- 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
- Data output
- Made of stainless steel



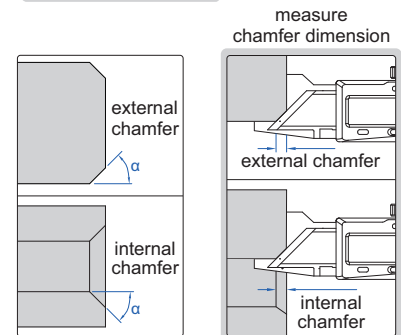
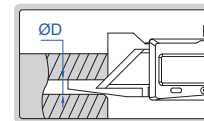
With data interface (optional data output cable: code 7315-25 receiver is needed page 5, 7214-25 page 11, 7302-21 page 20)

Code	Range	Accuracy	Chamfer (α)	A	B	$\varnothing D$
1180-6	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	45°	15mm	22mm	7mm
1180-61	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	15°	33mm	20mm	11mm
1180-62	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	20°	33mm	20mm	11mm
1180-63	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	30°	15mm	22mm	8mm
1180-66	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	60°	14mm	21mm	7mm

Built-in wireless (receiver code 7315-2/3/6/7/8/9 is needed)

Code	Range	Accuracy	Chamfer (α)	A	B	$\varnothing D$
1180-6WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	45°	15mm	22mm	7mm
1180-61WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	15°	33mm	20mm	11mm
1180-62WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	20°	33mm	20mm	11mm
1180-63WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	30°	15mm	22mm	8mm
1180-66WL	0-10mm/0-0.39"	$\pm 0.06\text{mm}$	60°	14mm	21mm	7mm

for internal chamfer measurement, diameter should be larger than $\varnothing D$



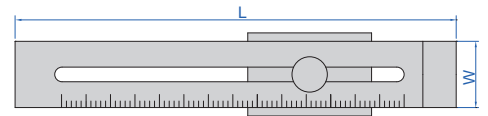
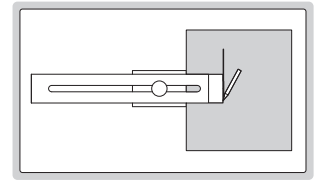
MARKING GAUGES



7120-200A

- Made of carbon steel
- Stainless steel chrome plated

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



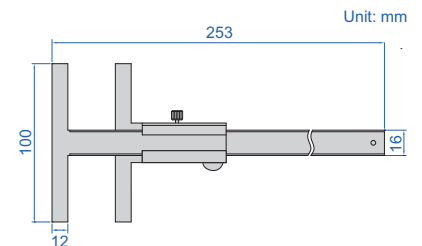
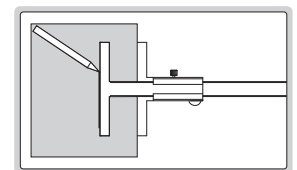
T-SHAPE MARKING GAUGE



1275-150B

- Made of stainless steel
- Satin chrome plated reading surface

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



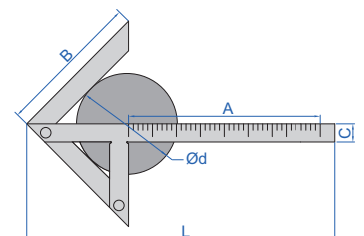
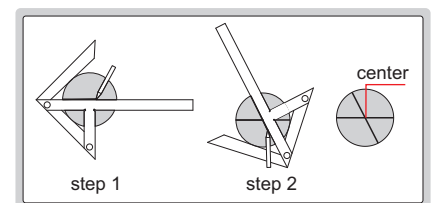
CENTER MARKING GAUGES



7205-100

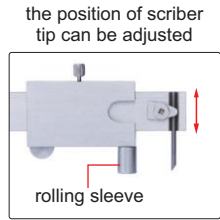
- Marking the center of round plates and shafts
- Made of stainless steel
- Satin chrome plated

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



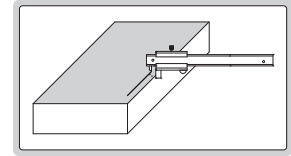
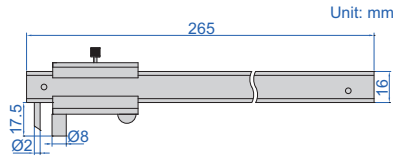
SCRIBING CALIPER

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



7202-200A

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



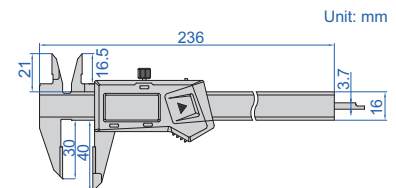
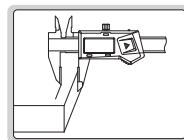
DIGITAL SCRIBING CALIPER

- Non waterproof
- 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



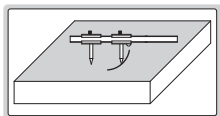
1166-150A

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



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SCRIBING CALIPER



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

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



7203-300A

