



J.W. DONCHIN CO. • 4841-43 W. Chicago Ave • Chicago, IL 60651-3224
 Ph: 773-261-2182 • Fax: 773-261-2867 • sales@jwdonchin.com • www.jwdonchin.com

SLIDE CALIPERS

PG	DESCRIPTION	SERIES	RANGE
99	SLIDE CALIPERS		
100	Electronic Calipers	797 Series	0-12" (0-300 mm)
101	Electronic Calipers	799 Series	0-12" (0-300mm)
102	Dial Calipers 1	20 Series	0-12"
102	Dial Calipers	120M Series	0-300mm
103	Dial Calipers	120 Series (continued)	
104	Dial Calipers	1202 Series	0-12"
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105	Offset Dial Caliper	120J	0-6"
105	Dial Calipers with Long Nib Jaws	120B	0-12"
105	Dial Calipers with Long Nib Jaws	120MB	0-300mm
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106	Master Vernier Calipers	123 Series	0-72"
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- ◆ Slide calipers are very versatile measuring tools. While they do not provide the same degree of precision as a micrometer, they are very accurate and each tool offers much more range than a single micrometer.
- ◆ The best digital and dial slide calipers, regardless of resolution, are accurate to within $.001''$ or 0.03mm , every $6''$ or 150mm . The best vernier calipers are accurate to $.0005''$ or 0.013mm per foot or 300mm .
- ◆ Slide calipers come in different styles – electronic calipers, mechanical dial calipers, vernier calipers and plain slide calipers.
- ◆ Because slide caliper measuring surfaces are not in line with the beam of the caliper, some care should be taken not to use too much measuring pressure. This will lessen the possibility of springing the jaws. We use approximately one-half pound (.2kg) of pressure to set up the tools. However, a specific pressure is not necessary – just use good judgment for a minimum measuring pressure.
- ◆ To check or set the separate I.D. nibs on a caliper, a micrometer or a ring gage can be used. Individual “feel” is important when measuring an I.D. This is because the measuring surfaces are so thin that small pressure changes that are normal from person to person can affect the reading as much as $.001''$ (0.03mm) or so.
- ◆ It is important to keep the sliding surfaces clean and lightly oiled.





Electronic Calipers No. 797 Series 0-12" (0-300 mm)

Starrett 797 Electronic Calipers provide an IP65* level of protection against foreign matter in hostile shop environments. They are coolant and water resistant and offer excellent protection against chips, dirt, dust and other contaminants.

The extra large LCD (character height .310") makes the 797 exceptionally easy to read. All 797 models also include an output port for RS232 equipped devices.

While there are other IP65 electronic calipers available, only the 797 is a Starrett – the tool of choice for the most experienced toolmakers and machinists when the measurements are most critical.

Features

- ◆ Large, easy-to-read LCD display
- ◆ IP65* level of protection against coolant, water, dirt and dust
- ◆ Induction type linear encoder system
- ◆ Hardened stainless steel measuring surface for long life
- ◆ Depth rod attachment available for all sizes to more accurately seat the tool
- ◆ Fine adjustment
- ◆ Lock to hold the slide in position
- ◆ Linear accuracy meets DIN862
- ◆ Resolution is .0005" (0.01mm)
- ◆ Long life CR2032 3V battery (>3500 continuous hours of battery life)
- ◆ Inch/mm conversion
- ◆ Zero at any position
- ◆ Manual on/off, plus an automatic off after four hours of nonuse
- ◆ Output data to Starrett SPC Plus hardware and software and to PCs
- ◆ Works well with Starrett DataSure™ Wireless Data Collection Systems

* According to IEC529, IP65 stands for:
 – The first number "6" identifies protection against ingress of dust
 – The second number "5" identifies protection against water jets projected by a nozzle from any direction for a duration of three minutes



No. 797 6" Electronic Caliper.

All 797 models include a port for output to a variety of peripherals, either through a traditional wire, or by connecting to a Starrett DataSure™ Wireless Data Collection System End Node (above).



Range	Description	Catalog No.	EDP No.
0-6" (150mm)	Caliper with Output in Fitted Plastic Case	797B-6/150	68659
	Caliper with Output, Standard Letter of Certification†, in Fitted Plastic Case	797B-6/150 W/SLC	68823
0-8" (200mm)	Caliper with Output in Fitted Plastic Case	797B-8/200	68660
	Caliper with Output, Standard Letter of Certification†, in Fitted Plastic Case	797B-8/200 W/SLC	68824
0-12" (300mm)	Caliper with Output in Fitted Plastic Case	797B-12/300	68661
	Caliper with Output, Standard Letter of Certification†, in Fitted Plastic Case	797B-12/300 W/SLC	68825

Accessories, Cables and Case Information

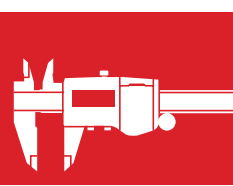
Description	Catalog No.	EDP No.
Center Distance Attachment	PT26151	64440
Depth Attachment	PT22431	64640
Computer Interface Cable to PC (RS232)	PT62606	68822
Shielded Cable to 761/772 Series Starrett Modules	PT61340	65648
Two 3-Volt Batteries, No. CR2032	PT99492	65650
Deluxe Padded Case for 0-6" (150mm) Calipers	723ZZ-6	57070
Finished Wood Case for 0-8" (200mm) Calipers	950	63878
Finished Wood Case for 0-12" (300mm) Calipers	946	56695

Approximate Jaw Depths

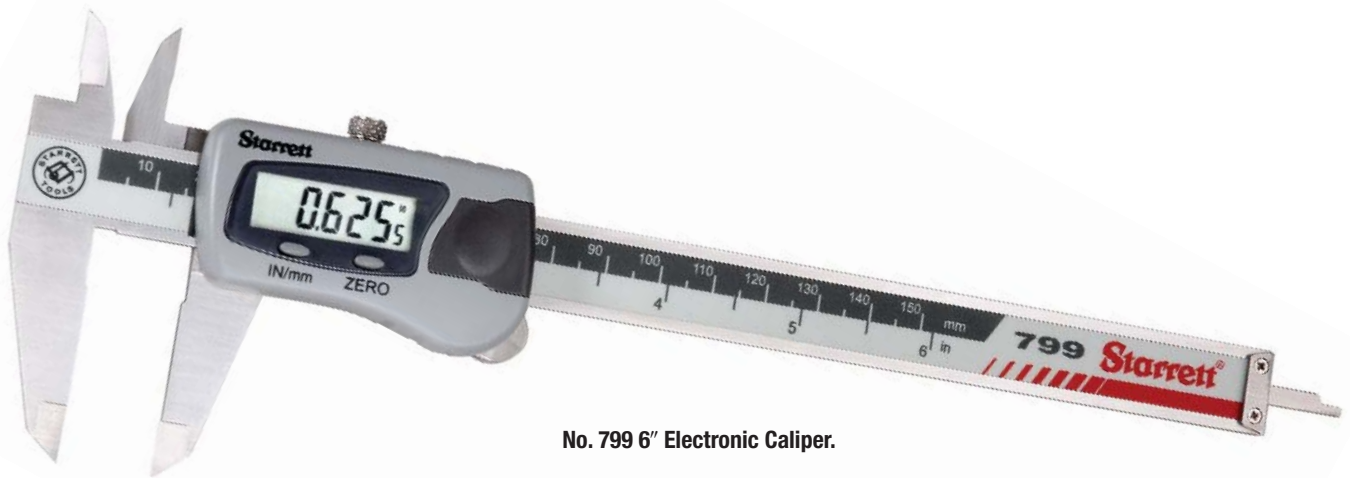
	6" (150mm)	8" (200mm)	12" (300mm)
Outside	1 1/2" (38mm)	1 7/8" (47.6mm)	2 1/2" (63.5mm)
Inside	5/8" (16mm)	3/4" (19mm)	3/4" (19mm)

Packed one in a box.

NOTE: † Includes redemption card for Standard Letter of Certification (SLC).



NEW



No. 799 6" Electronic Caliper.

Electronic Calipers No. 799 Series 0-12" (0-300mm)

Starrett's new 799 Series Electronic Calipers are light, comfortable, easy to use, and constructed with features that have made Starrett slide calipers the machinist's first choice for many years.

The 799 offers a slim, streamlined profile, a large, clear, easy-to-read LCD display, long battery life, and function buttons for zero and inch/mm.

799 calipers are available in 0-6", 0-8", and 0-12" models, and furnished in a fitted, protective case.

Features

- ◆ Lightweight, ergonomic design
- ◆ Large easy-to-read LCD, .32" high
- ◆ Inch/millimeter conversion reads .0005" or 0.01mm
- ◆ Zero at any position
- ◆ Automatic shut-off after 5 minutes of nonuse
- ◆ Last measuring position retained when shut off
- ◆ Easy access to the single, long-life battery
- ◆ Hardened stainless steel body for long life
- ◆ Integrated depth rod on all sizes
- ◆ Fine adjustment thumb wheel
- ◆ Lock screw to hold the slide in position
- ◆ Resolution is .0005" (0.01mm)
- ◆ Linear accuracy meets DIN862

Packed one in a box.

Range	Description	Catalog No.	EDP No.
0-6" (150mm)	Caliper in Fitted Plastic Case	799A-6/150	67410
	Caliper with Standard Letter of Certification†, in Fitted Plastic Case	799A-6/150 W/SLC	67620
0-8" (200mm)	Caliper in Fitted Plastic Case	799A-8/200	67412
	Caliper with Standard Letter of Certification†, in Fitted Plastic Case	799A-8/200 W/SLC	67413
0-12" (300mm)	Caliper in Fitted Plastic Case	799A-12/300	67621

Accessories and Case Information

Description	Catalog No.	EDP No.
Center Distance Attachment	PT26151	64440
Depth Attachment for 6" and 8" Calipers	PT22431	64640
1 1/2 Volt Battery, No. SR44	PT61918	67169
Deluxe Padded Case for 0-6" (150mm) Calipers	723ZZ-6	57070
Finished Wood Case for 0-8" (200mm) Calipers	950	63878
Finished Wood Case for 0-12" (300mm) Calipers	946	56695

Approximate Jaw Depths

	6" (150mm)	8" (200mm)	12" (300mm)
Outside	1 1/2" (38mm)	2" (50.8mm)	2 1/2" (63.5mm)
Inside	5/8" (16mm)	3/4" (19mm)	23/32" (18.3mm)



NOTE: † Includes redemption card for Standard Letter of Certification (SLC).



No. 799 Series specifications



Range	Description	Catalog No.	EDP No.
0-6" (150mm)	Caliper in Fitted Plastic Case	799A-6/150	67410
	Caliper with Standard Letter of Certification†, in Fitted Plastic Case	799A-6/150 W/SLC	67620
0-8" (200mm)	Caliper in Fitted Plastic Case	799A-8/200	67412
	Caliper with Standard Letter of Certification†, in Fitted Plastic Case	799A-8/200 W/SLC	67413
0-12" (300mm)	Caliper in Fitted Plastic Case	799A-12/300	67621
0-24" (600mm)	Caliper in Fitted Plastic Case	799AZ-24/600	11978
0-40" (1000mm)	Caliper in Fitted Plastic Case	799AZ-40/1000	11979

NEW

Accessories and Case Information

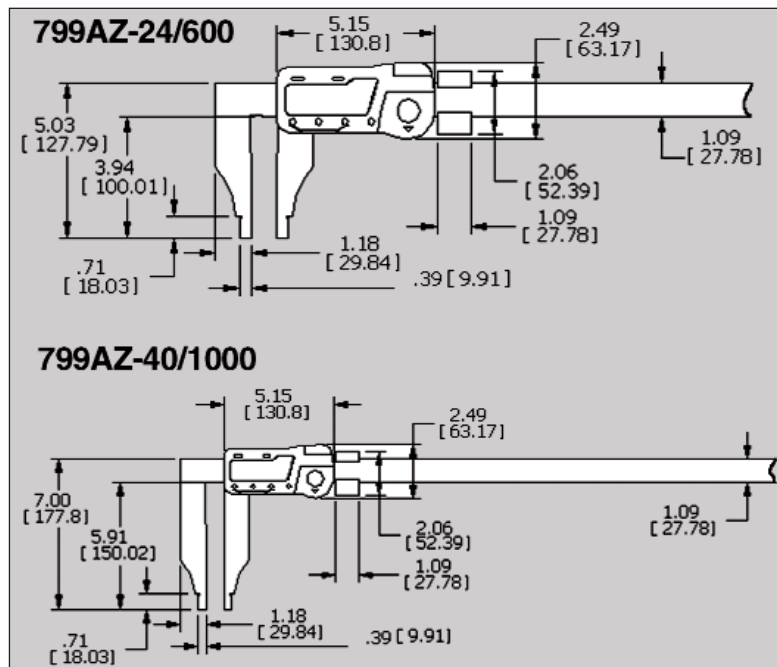
Description	Catalog No.	EDP No.
6", 8" & 12" Center Distance Attachment for Calipers Only	PT26151	64440
Depth Attachment	PT22431	64640
1-1/2 Volt Battery. No. SR44	PT61918	67169
Deluxe Padded Case for 0-6" (150mm) Calipers	723ZZ-6	57070
Finished Wood Case for 0-8" (200mm) Calipers	950	63878
Finished Wood Case for 0-12" (300mm) Calipers	946	56695

NOTE: † Includes redemption card for Standard Letter of Certification (SLC).

Approximate Jaw Depths

	6" (150mm)	8" (200mm)	12" (300mm)	24" 600mm	40" (1000mm)
Outside	1-1/2" (38mm)	2" (50.8mm)	2-1/2" (63.5mm)	4" (100mm)	4" (100mm)
Inside	5/8" (16mm)	3/4" (19mm)	23/32" (18.3mm)	11/16" (17.46mm)	11/16" (17.46mm)

24" & 40" Dimension Detail





No. 120 Series and 120M Series Dial Calipers



120 Series 6" Dial Calipers are available with White, Black, or Red dials.



150mm Metric Dial Caliper with yellow dial.

No. 120 Series 0-12"
No. 120M 0-300mm

The Only American Made Dial Caliper ...
This is one of the handiest measuring tools available, used by mechanics and toolmakers everywhere. It is direct reading, reliable and accurate.

Readability Features

- ◆ Sharp, clear dial graduations of .001" or 0.02mm – .100" or 2mm in one revolution
- ◆ Sharp, black graduations on the satin finished bar, every .100" or 1mm
- ◆ Choice of black, red, or white inch dials; millimeter dials are yellow

Ease-of-Handling Features

- ◆ Knife-edge contacts for both inside and outside measurements
- ◆ One hand use with the thumb-operated, fine adjustment roll

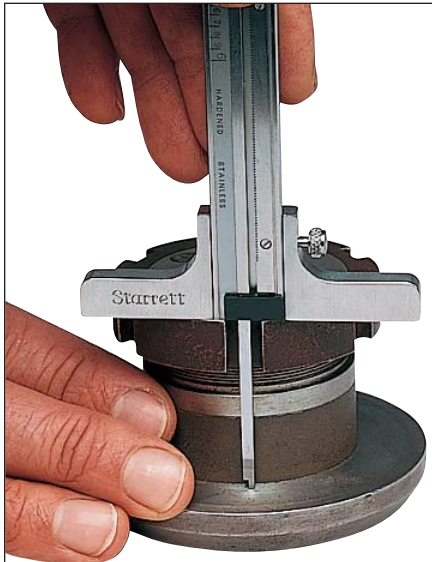
- ◆ Lock screw for dial bezel
- ◆ Lock screw for holding the sliding jaw in position
- ◆ 6" (150mm) and 9" (225mm) models have a covered rack depth rod. A detachable depth rod is available for the 12" model
- ◆ Parallel lines can be scribed on a workpiece by setting the caliper jaw to the required dimensions, locking the movable jaw with the lock screw and then using the front edge of the fixed jaw as the scribing surface

Accuracy and Long-Life Features

- ◆ Long-wearing carbide faces on outside contacts on models Nos. 120AX-6 and 120MX-150 only
- ◆ Hardened stainless steel bar, measuring surfaces, rack, gears and depth rod
- ◆ Positive, split-gear anti-backlash control
- ◆ Rack teeth point down to make it easy to shed foreign matter and thereby keep the area clean



No. 120 Series Dial Calipers (continued)



Above: Making depth measurement with caliper and depth attachment.

Below: 6" Caliper with convenient holster.



Approximate Jaw Depths for 120 Series

	120 6" & 9" (150mm & 225mm)	120 12" (300mm)
Outside	1 1/2" (38mm)	2 1/2" (63mm)
Inside	5/8" (16mm)	3/4" (19mm)

All items packed one per box.

Graduation – .001"

Range	Dial Color	Description	Catalog No.	EDP No.
0-6"	White	Caliper in Case*	120A-6	64514
		Caliper, Standard Letter of Certification†, in Case*	120A-6 W/SLC	66568
		Caliper with Carbide Faces in Case*	120X-6	65909
0-9"	Black	Caliper in Case*	B120A-6	64515
		Caliper, Standard Letter of Certification†, in Case*	B120A-6 W/SLC	66917
		Caliper in Case*	R120A-6	64516
0-9"	Red	Caliper, Standard Letter of Certification†, in Case*	R120A-6 W/SLC	66918
		Caliper in Finished Wood Case	120AZ-9	64520
		Caliper without Case	120A-9	64517
0-12"	White	Caliper in Finished Wood Case	120Z-12	56693
		Caliper, Standard Letter of Certification†, in Finished Wood Case	120Z-12 W/SLC	66569
		Caliper without Case	120-12	56694
		Caliper, Standard Letter of Certification†, without Case	120-12 W/SLC	66919
		Caliper without Case	120-12	56694

Graduation – 0.02mm

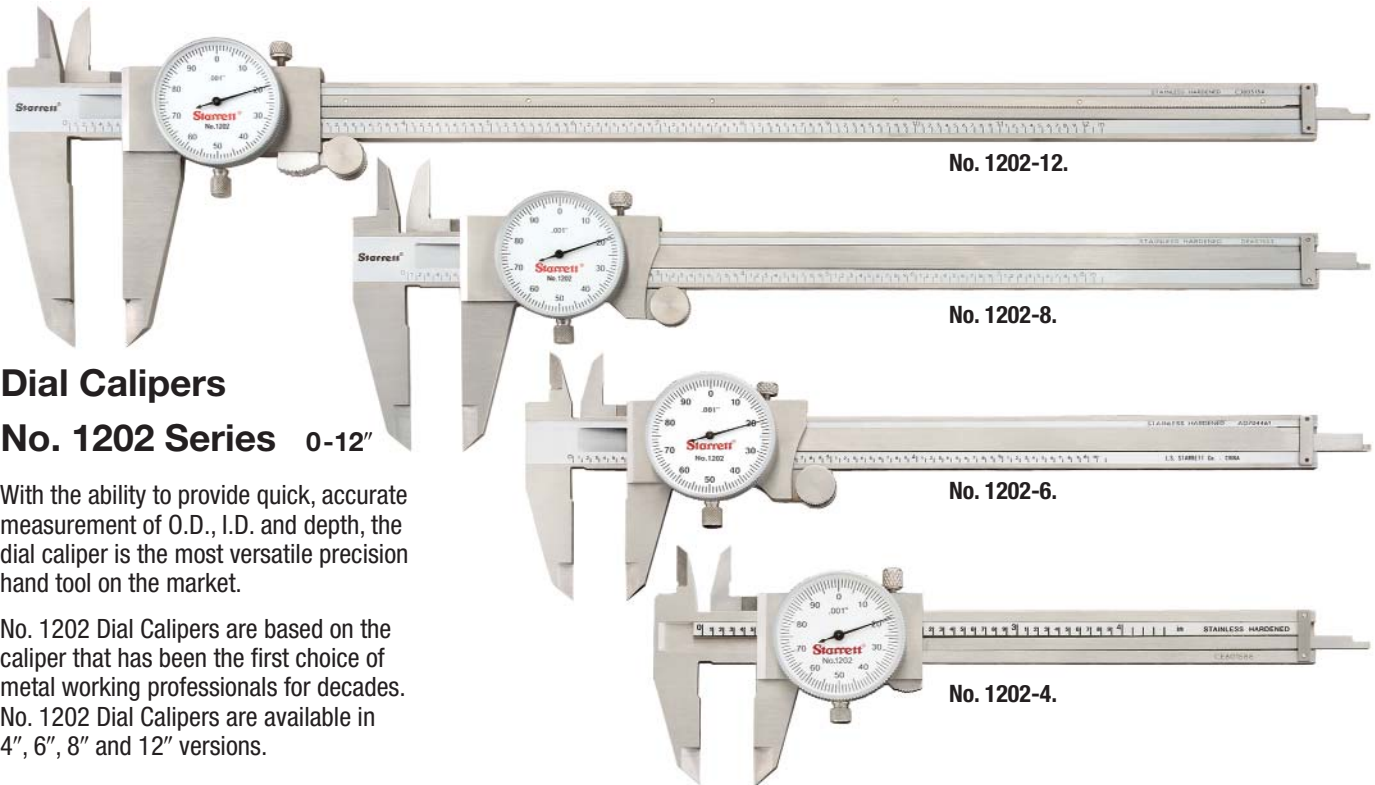
0-150mm	Yellow	mm Caliper in Case*	120AM-150	66295
		mm Caliper, Standard Letter of Certification†, without Case	120AM-150 W/SLC	66920
		mm Caliper with Carbide Faces in Case*	120MX-150	65910
0-225mm	Yellow	mm Caliper in Wood Case	120MZ-225	64508
		mm Caliper without Case	120M-225	64509
0-300mm	Yellow	mm Caliper in Wood Case	120MZ-300	64510
		mm Caliper, Standard Letter of Certification†, in Wood Case	120MZ-300 W/SLC	66922
		mm Caliper without Case	120M-300	64511
		mm Caliper, Standard Letter of Certification†, without Case	120M-300 W/SLC	66921

Accessories and Cases Only

Center Distance Attachment**	PT26151	64440
Depth Attachment for 6", 9" and 150mm Dial Calipers	PT22431	64640
Detachable Depth Rod for 12" Dial Calipers	PT26091	65100
Deluxe Padded Case for 6" (150mm) Dial Calipers	943	55971
Finished Wood Case for 9" (225mm) Dial Calipers	950	63878
Finished Wood Case for 12" (300mm) Dial Calipers	946	56695
Leather Holster for 6" (150mm) Dial Calipers	915	64166

NOTES: † Includes redemption card for Standard Letter of Certification (SLC).

*Fitted plastic case. **See details in this section.



No. 1202-12.

No. 1202-8.

No. 1202-6.

No. 1202-4.

Dial Calipers

No. 1202 Series 0-12"

With the ability to provide quick, accurate measurement of O.D., I.D. and depth, the dial caliper is the most versatile precision hand tool on the market.

No. 1202 Dial Calipers are based on the caliper that has been the first choice of metal working professionals for decades. No. 1202 Dial Calipers are available in 4", 6", 8" and 12" versions.

Readability Features

- ◆ Sharp, clear dial graduations of .001" with .100" per revolution (except for the 1202F Model – see below)
- ◆ Sharp, black graduations on the satin finished bar, every .100"

Ease-of-Handling Features

- ◆ Knife-edge contacts
- ◆ Thumb-operated fine adjustment roll
- ◆ Adjustable bezel
- ◆ Lock screws for sliding jaw and dial bezel
- ◆ Covered rack depth rod (4", 6" and 8" models)

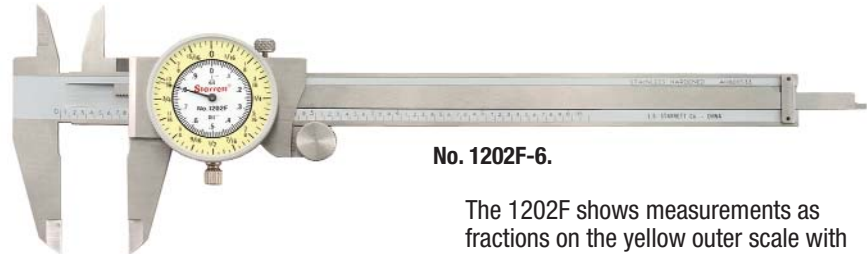
Accuracy and Long-Life Features

- ◆ Hardened stainless steel bar, measuring surfaces, rack, gears and depth rod
- ◆ Positive, spring-loaded double pinion anti-backlash control

Range	Description	Catalog No.	EDP No.
0-4"		1202-4	68814
0-6"		1202-6	66964
0-8"	Caliper in Fitted Case	1202-8	66979
0-12"		1202-12	66980
0-6" Fractional		1202F-6	68931

Fractional Dial Calipers

No. 1202F-6 0-6"



No. 1202F-6.

The 1202F shows measurements as fractions on the yellow outer scale with 1/64th inch graduations, and decimal measurements on the white inner scale with 1/100th inch graduations.

For many applications, the dimension being checked is specified as a fraction. Since dial calipers display measurements as decimals, the person doing the measurement must convert the decimal readout from the dial into a fraction – inconvenient at best, and sometimes leading to errors. The Starrett 1202F solves this problem.

Features

- ◆ 1/64" graduations on the yellow outer scale, and .01" on the white inner scale.
- ◆ Except for dial graduation and color, the 1202F-6 has the same features as other 1202 Series dial calipers



Fractional Dial on the 1202F-6

NEW



Offset Dial Caliper

No. 120J 0-6"

This tool has an adjustable jaw for versatility when measuring different planes that can't be reached with a regular caliper. The reference jaw is adjustable in height to be either longer or shorter than the sliding jaw. All other features are the same as our No. 120 dial caliper.

- ◆ Adjustable jaw – 3 1/2" (88mm) long
- ◆ Extends up to 5/8" (16mm) longer than the sliding jaws
- ◆ Caliper in deluxe padded case

Packed one in a box.



0-6" range

Catalog No.	EDP No.	Description
120JZ-6	65866	Caliper in Deluxe Padded Case
PT26341	65867	Adjustable Jaw Only

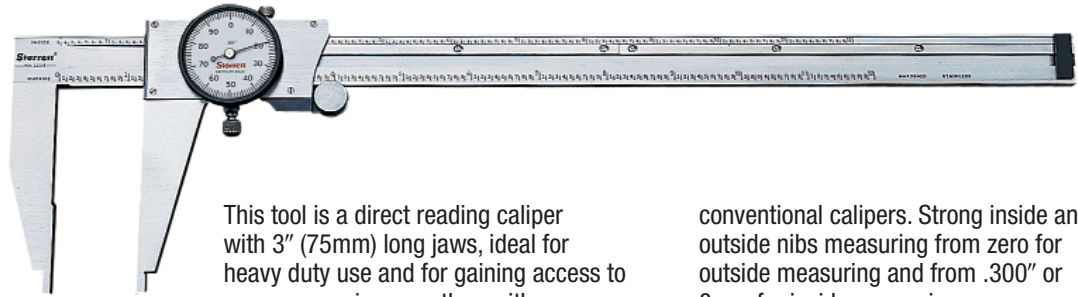
Dial Calipers with Long Nib Jaws

No. 120B

0-12"

No. 120MB

0-300mm



This tool is a direct reading caliper with 3" (75mm) long jaws, ideal for heavy duty use and for gaining access to more measuring area than with

conventional calipers. Strong inside and outside nibs measuring from zero for outside measuring and from .300" or 8mm for inside measuring.

* Includes redemption card for Standard Letter of Certification (SLC).

Packed one in a box.

Range	Dial Color	Catalog No.	EDP No.
0-12"	White	120B-12	65067
0-300mm	Yellow	120MB-300	65154
		120MB-300 W/SLC*	66923

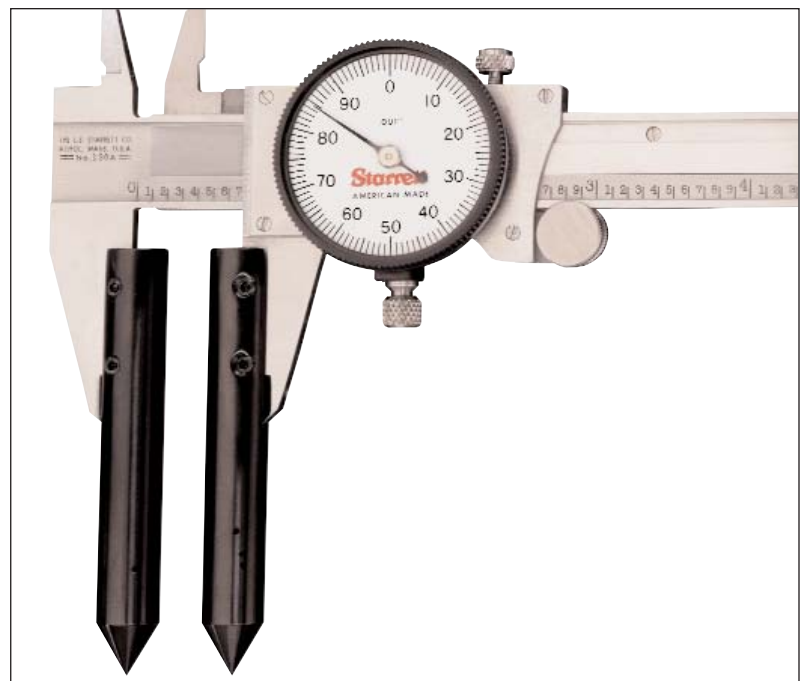
Center Distance Attachment

PT26151 / EDP No. 64440

A set of two jaws with body sizes of .400" and conical points, enabling the user to measure the center distance between holes or center-punched locations that are at least .400" apart and less than .400" in diameter.

- ◆ Can be used with metric calipers by setting the caliper to 10.16mm
- ◆ Will fit Starrett Nos. 797 and 120, 6" through 12", No. 123, 6" through 24", and No. 1202, 4" through 12" sizes

Packed one in a box.





Left: No. 123-6 Series 6" Inch Reading Master Vernier Caliper.
Right: No. 123EM-6 Millimeter Reading Master Vernier Caliper.

Master Vernier Calipers

No. 123 Series 0-72"

No. 123M Series 0-600mm

No. 123EM Series
0-24" / 0-600mm

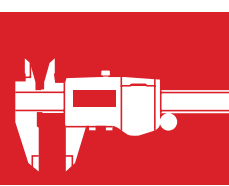
This vernier caliper is the ultimate example of slide caliper design. It is more accurate, has the easiest reading vernier style, is stronger and is offered in much longer lengths than other slide calipers.

Readability Features

- ◆ Long 50-division vernier scales, made popular by Starrett. This feature permits just half as many bar graduations as conventional single-vernier tools. These widely-spaced graduations make possible easy reading to .001" or 0.02mm without requiring a magnifying glass
- ◆ Flush fitting of the vernier scales to the main scale means that these are in the same plane, which eliminates parallax. Vernier scales are adjustable
- ◆ The open-face design of the slide allows both the inside and outside vernier scale on the same side, thus allowing both verniers to be read without turning the tool over
- ◆ Black lines and figures against the Starrett satin chrome finish make reading a pleasure, not an effort
- ◆ Screw-type adjusting nut allows for fine measuring adjustments
- ◆ Lock nut to hold measurements

Long-Life and Accuracy Features

- ◆ These tools are made of the finest tool steel. This makes the jaws harder and longer-wearing than stainless tools. All tools through 24" (600mm) also have hardened and stabilized bars
- ◆ Measuring surfaces are hardened, ground and lapped to close limits
- ◆ All graduations are machine divided for accuracy, not photo-engraved. They are also deeper and sharper
- ◆ The combination straight and angular ways on the master bar allow for positive alignment of graduations and easy adjustment of the flush-fitting verniers
- ◆ Sizes through 24" have divider points on the back side to accurately set dividers and trammels as needed
- ◆ Tools with inch and millimeter graduations on the same bar have outside readings only. (Inside readings must be compensated for by adding the nib width to the indicated reading.)
- ◆ The longer length of the adjusting jaw slide provides a longer bearing surface on the master bar, ensuring squareness with the solid jaw and extra resistance to springing
- ◆ Tight, smoothly fitted slides for maximum accuracy and easy adjustment
- ◆ Made to rigid Starrett standards



No. 123 Series Specifications

Inch Reading / Graduation – .001"

Range	Bar Width	Approx. Jaw Depth	Max. Nib Width Closed	Description	Catalog No.	EDP No.
0-6"	11/16"	1 9/16"	.250"	Caliper in Finished Wood Case	123Z-6	50524
				Caliper, SLC*, in Finished Wood Case	123Z-6 W/SLC	66925
				Caliper without Case	123-6	50525
				Caliper, SLC*, without Case	123-6 W/SLC	66926
0-12"	15/16"	2 5/16"	.300"	Caliper In Finished Wood Case	123Z-12	50526
				Caliper, SLC*, in Finished Wood Case	123Z-12 W/SLC	66927
				Caliper without Case	123-12	50527
				Caliper, SLC*, without Case	123-12 W/SLC	66928
0-24"	15/16"	2 5/16"	.300"	Caliper in Finished Wood Case	123Z-24	50528
0-36"	1 3/8"	3"	.500"	Caliper in Finished Wood Case	123Z-36	50530
0-48"	1 3/8"	3"	.500"	Caliper in Finished Wood Case	123Z-48	50532
0-60"	2 1/2"	4 1/2"	.750"	Caliper in Finished Wood Case	123Z-60	64383
	1 3/8"	3"	.500"	Lightweight Caliper in Finished Wood Case	‡L123Z-60	63189
0-72"	2 1/2"	4 1/2"	.750"	Caliper in Finished Wood Case	123Z-72	64374
	1 3/8"	3"	.500"	Lightweight Caliper in Finished Wood Case	‡L123Z-72	63190

Millimeter Reading / Graduation – 0.02mm

0-150mm	17.46mm	40mm	6.4mm	Caliper in Finished Wood Case	123MZ-150	56100
				Caliper Without Case	123M-150	56099
0-300mm	23.81mm	58mm	7.6mm	Caliper in Finished Wood Case	123MZ-300	56102
				Caliper without Case	123M-300	56101
0-600mm	23.81mm	58mm	7.6mm	Caliper in Finished Wood Case	123MZ-600	56104

Inch and Millimeter Reading / Graduation – .001" and 0.02mm

0-6" (150mm)	11/16" (17.46mm)	1 9/16" (40mm)	.250" (6.35mm)	Caliper in Finished Wood Case	123EMZ-6	50534
				Caliper without Case	123EM-6	50535
0-12" (300mm)	15/16" (23.81mm)	2 5/16" (58mm)	.300" (7.62mm)	Caliper in Finished Wood Case	123EMZ-12	50536
				Caliper without Case	123EM-12	50537
0-24" (600mm)	15/16" (23.81mm)	2 5/16" (58mm)	.300" (7.62mm)	Caliper in Finished Wood Case	123EMZ-24	50538

NOTE: For inside measurements, the thickness of the nibs must be added to the caliper reading as follows:

Catalog No.	Range	Add Nib Thickness Below to Caliper Reading
No. 123 E & M	0-6" or 150mm	.250" (English) or 6.35mm (Metric)
No. 123 E & M	0-12" or 300mm	.300" (English) or 7.62mm (Metric)
No. 123 E & M	0-24" or 600mm	.300" (English) or 7.62mm (Metric)

NOTES: * Includes redemption card for Standard Letter of Certification (SLC).

‡ Lightweight versions weigh approximately 10 lbs. for the 60" model and 12 lbs. for the 72" model. Regular 60" model weighs approximately 32 lbs. and the regular 72" weighs approximately 36 lbs.

Other sizes available on special order – priced on application. Special jaws priced on application.

HARDENED BARS on 6", 12" and 24" models: these models are also furnished with center points for dividers.

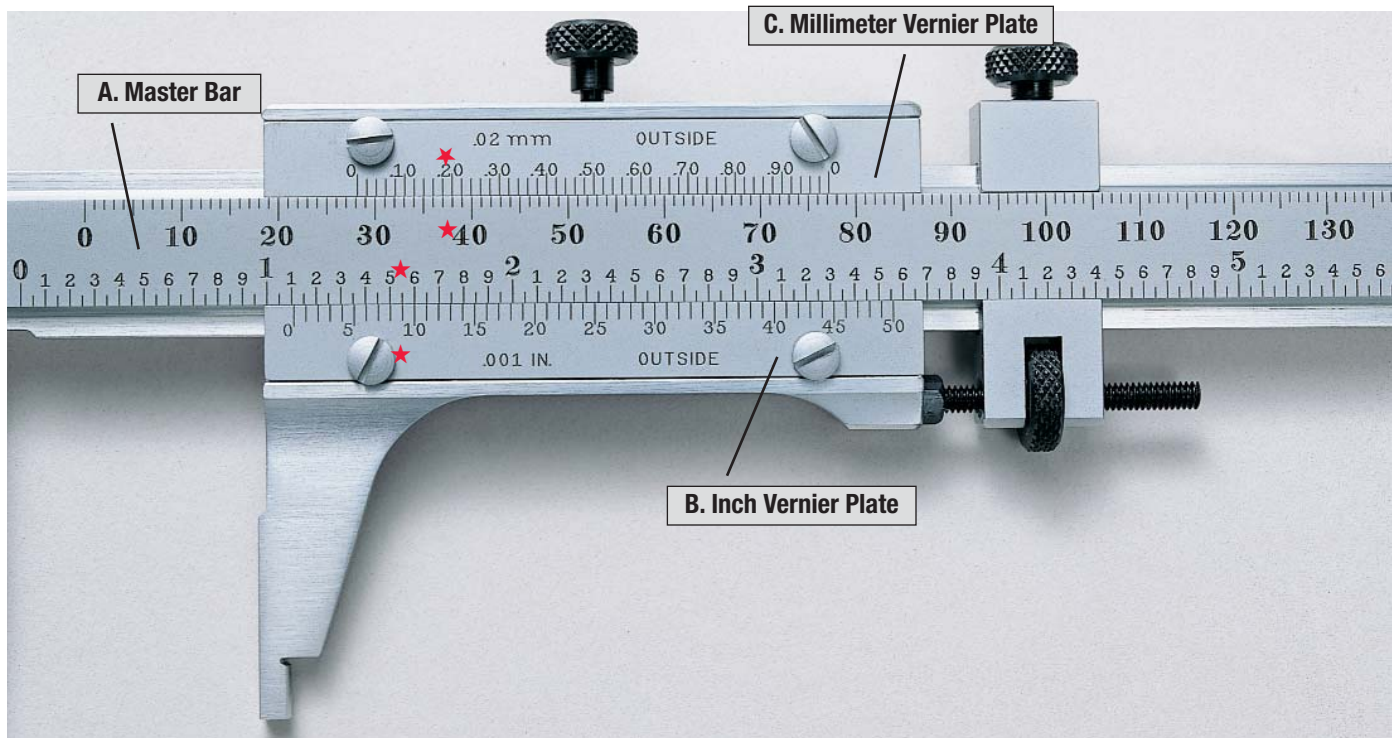
Packed one in a box.

Center Distance Attachment

PT26151 / EDP No. 64440

A set of two jaws with body sizes of .400" and conical points, enabling the user to measure the center distance between holes or center-punched locations that are at least .400" apart and less than .400" in diameter.

- ◆ Can be used with metric calipers by setting the caliper to 10.16mm
- ◆ Will fit Starrett Nos. 797 and 120, 6" through 12", No. 123, 6" through 24", and No. 1202, 4" through 12" sizes



How to Read a Starrett 50-Division Vernier Caliper Gage Graduated in Inches and Millimeters (Direct Reading)

Inch Reading

- ◆ Refer to the lower bar graduations and the inch vernier plate. Inches are numbered in sequence over the full range of the bar. Every second graduation between the inch lines is numbered and equals $.100''$. Each bar graduation is $.050''$
- ◆ The vernier plate is divided into 50 parts, each representing $.001''$. Every fifth line is numbered – 5, 10, 15, 20 ... 45, 50 – for easy counting
- ◆ To read the gage, first count how many inches and how many $.050''$ lines lie between the zero line on the bar and the zero line on the vernier plate and add them
- ◆ Then count the number of graduations on the vernier plate from its zero line to the line that coincides with a line on the bar. Multiply the number of vernier plate graduations you counted by $.001''$ and add this figure to the number of inches and $.050''$ lines you counted on the bar. This is your total reading

Example

- ★ In the photo, the vernier plate zero line is one inch ($1.000''$) plus $.100''$ beyond the zero line on the bar, or $1.100''$. The 9th graduation on the vernier plate coincides with a line on the bar (as indicated by stars). $9 \times .001$ ($.009''$) is therefore added to the $1.100''$ bar reading, and the total reading is $1.109''$

Millimeter Reading

- ◆ Refer to the upper bar graduations and millimeter vernier plate. Each bar graduation is 1.00mm . Every tenth graduation is numbered in sequence – 10mm, 20mm, 30mm, 40mm, etc. – over the full range of the bar. This provides for direct reading in millimeters
- ◆ The vernier plate is divided into 50 parts, each representing 0.02mm . Every fifth line is numbered in sequence – 0.10mm, 0.20mm, 0.30mm ... 0.80mm, 0.90mm – providing for direct reading in hundredths of a millimeter
- ◆ To read the gage, first count how many millimeters lie between the zero line on the bar and the zero line on the vernier plate
- ◆ Then find the graduation on the vernier plate that coincides with a line on the bar and note its value in hundredths of a millimeter. Add the vernier plate reading in hundredths of a millimeter to the number of millimeters you counted on the bar. This is your total reading

Example

- ★ In the photo, the vernier plate zero line is 28 millimeters beyond the zero line on the bar, and the 0.18mm graduation on the vernier plate coincides with a line on the bar (as indicated by stars). 0.18 millimeters is therefore added to the 28mm bar reading, and the total reading is 28.18 millimeters



Vernier Calipers

No. 125 Series 0-12" 0-300mm

NEW



The 125 Series is a high quality, basic vernier caliper that offers both English and metric measurement.

- ◆ High quality basic vernier caliper
- ◆ Lock screw for sliding jaw
- ◆ Hardened stainless steel depth rod
- ◆ Graduations: .002" English, .0.020mm metric
- ◆ Sharp, black graduations on the satin finished bar
- ◆ Starrett Global Series

Range	Description	Catalog No.	EDP No.
0-6", 0-150mm	Metric/English, 0-6"/150mm Caliper	125MEA-6/150	61660
0-8", 0-200mm	Metric/English, 0-8"/200mm Caliper	125MEA-8/200	61882
0-12", 0-300mm	Metric/English, 0-12"/300mm Caliper in Plastic Case	125MEA-12/300	61886

Packed one in a box.



Gear Tooth Vernier Calipers

No. 456 Series
20-2 Diametral Pitch

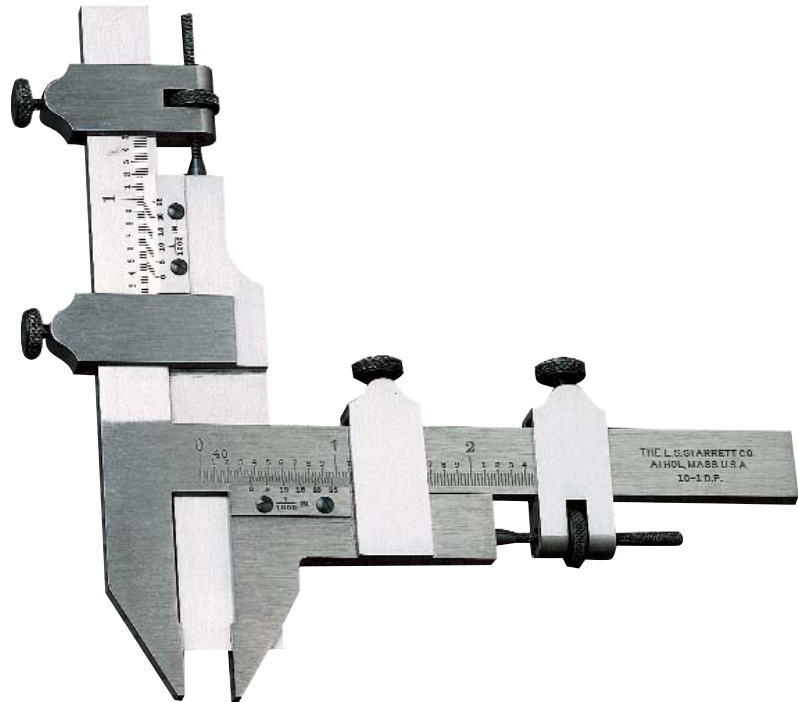
No. 456M Series
1 1/4-25mm Module

The Starrett No. 456 Gear Tooth Vernier Caliper is designed to measure in .001" or 0.02mm the thickness of gear teeth at the pitch line (the chordal thickness of the teeth) using the distance from the top of a tooth to the chord. For the same purpose, it can also be used for measuring hobs, form and thread tools, etc.

The thickness of a tooth at the pitch line is measured by an adjustable jaw after the addendum is set by the adjustable tongue. Each of these is adjusted independently by screws on the graduated bars.

For Tool Operation:

- Find on the chart, furnished with the tool, the number of teeth of the gear in question, and find the corrected addendum (s"). This figure is for one diametral pitch for inch measure, so divide it by the diametral pitch number – this figure is also for a one millimeter module for metric measure, so multiply it by the required module number. This gives a corrected addendum for this particular number of teeth.
- Next, measure the actual outside diameter of the gear and add or subtract one-half the difference between the theoretical gear diameter and actual measured gear diameter from the corrected addendum (s") found in the first step.
- Set the new calculated addendum figure on the adjustable tongue of the tool.
- Now, with the tongue on the top of the tooth, measure the chordal thickness with the horizontal vernier jaw and compare with the figure in the "t" column in the chart.
- All inch graduations are read to .001". However the No. 456A is graduated by .020" increments and the No. 456B is graduated by .025" increments. Nos. 456MA and 456MB are read to 0.02mm and graduated by 0.5mm increments.

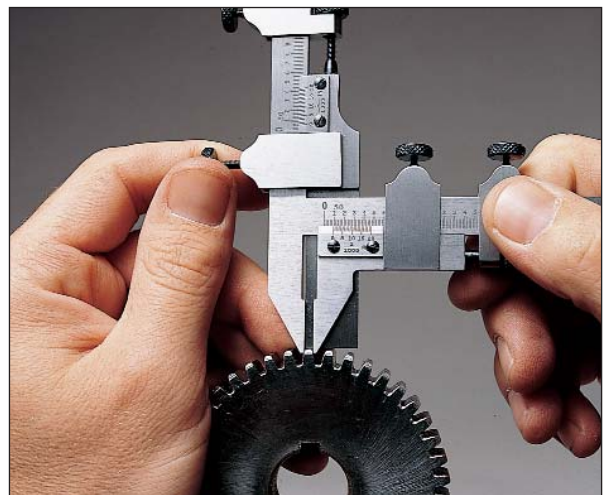


Graduation – .001"

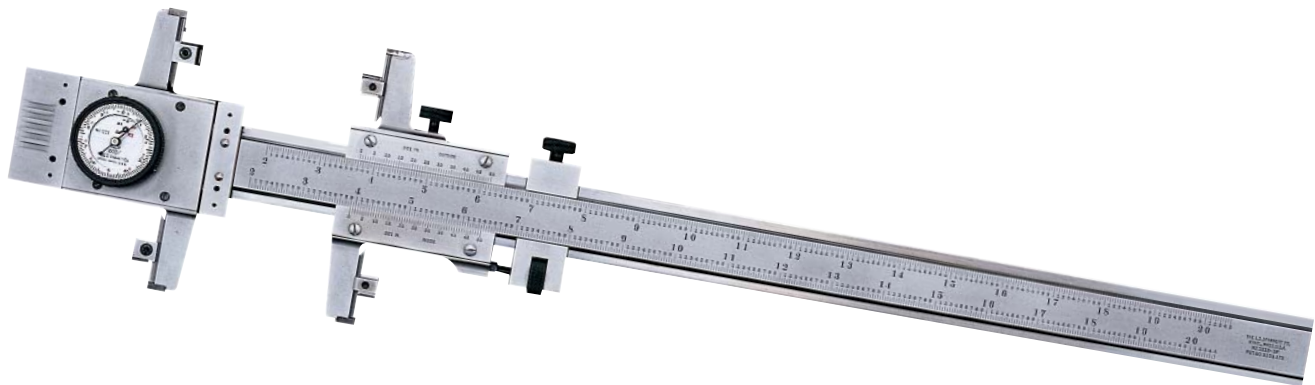
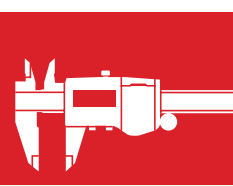
Range	Description	Catalog No.	EDP No.
20-2 Diametral Pitch	Caliper in Case	456AZ	52420
	Caliper without Case	456A	52422
10-1 Diametral Pitch	Caliper in Case	456BZ	52424
	Caliper without Case	456B	52426

Graduation – 0.02mm

1 1/4-12mm Module	Caliper in Case	456MAZ	52421
	Caliper without Case	456MA	52423
2 1/2-25mm Module	Caliper in Case	456MBZ	52425
	Caliper without Case	456MB	52427



Available with carbide measuring surfaces on special order. Available with attractive, protective case – sent with case unless otherwise ordered. Packed one in a box.



Special Master Dial Indicator Vernier Calipers

No. 1223 Series 2-48"

**No. 1223M Series
50-900mm**

The No. 1223 Series are so versatile that we make some models available as standard. However, special vernier tools like these can be built to your specifications by application through our Special Gage Department. The tool eliminates the need for skilled operator "feel" because it automatically sets in the correct gaging pressure.

- ◆ Tool has the basic Starrett No. 123 Master Bar with all of its advantages
- ◆ The slide and the dial gage sensing unit have inside and outside measuring jaws
- ◆ Direct outside and inside measurements in .001" (or 0.02mm) are read from the vernier after the indicator is zeroed. Out-of-roundness can be checked within .0001" (or 0.01mm) using the dial gage
- ◆ To use the caliper as a comparator, the vernier slide is set to the desired dimension and clamped. Plus or minus variations, outside or inside, are then read directly from the dial indicator
- ◆ All jaws have carbide measuring faces
- ◆ Adjustable work rests attached to the jaws permit the caliper to be placed on the work with the jaws at the correct measuring depth. The work rests have an adjustment range from 1/8-1" (3-25mm) and are locked in the desired position by a locking screw. Work rests are carbide-faced for long wear
- ◆ The dial gage head or sensing unit has a slide mounted on preloaded ball bearings at the end of the caliper bar. Movement of the jaws on the sensing unit actuates a dial indicator graduated in .0001" (or 0.01mm) with one complete revolution reading .010" (or 1mm). The indicator has a total range of $\pm .020"$ (or ± 1 mm), each .010" indicated by a telltale hand. Plus graduations are shown in black and minus graduations are shown in red. The indicator can be set to zero by a fine adjustment screw or by the bezel.
- ◆ A preload reversing switch on the back of the sensing unit permits instant changeover of the dial indicator for outside or inside readings
- ◆ A calibration master accurate to $\pm .000050"$ (or 0.001mm) is also available at extra charge for checking the relation between the vernier and the dial indicator zero. To check, set the vernier to the exact size of the master, place the master between either the "inside" or "outside" jaws, and adjust the dial indicator so that both the small and large hands read zero

Inch Reading

Range	Vernier Graduation	Dial Gage Head		Work Rest Adjustment	Catalog No.	EDP No.
		Grad.	Range			
2-18"	.001"	.0001"	$\pm .020"$	1/8-1"	1223-18	56137
2-24"					1223-24	56138
2-36"					1223-36	56139
2-48"					1223-48	56140

Millimeter Reading

50-450mm	0.02mm	0.01mm	± 1 mm	3-25mm	1223M-450	64366
50-600mm					1223M-600	64382
50-900mm					1223M-900	64373

Available with finished wood case – sent without case unless otherwise ordered. Calibration master available at extra charge. Packed one in a box.



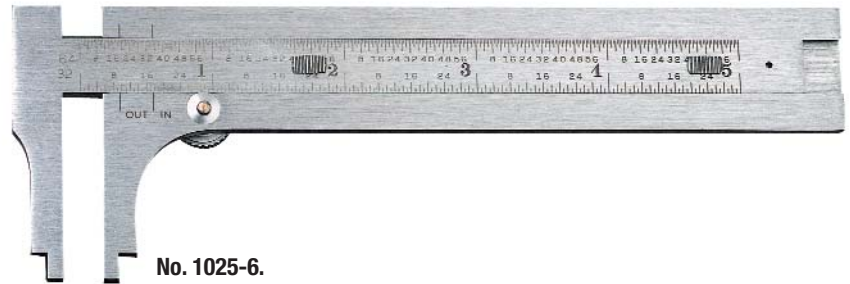
Stainless Steel Pocket Slide Calipers

No. 1025 Series
Inch Reading 5", 6"

No. 1025ME
Inch and Millimeter Reading
5"/130mm

These are very handy tools that permit quick and accurate outside and inside measurements. Their compact size fits easily in shop coat pockets and since there are no knife edges on the tools, they won't tear up pockets. Calipers are made of fine quality stainless steel.

- ◆ Accurate readings for both inside and outside measurements are made directly from the two lines marked "in" and "out" on one side of the stock
- ◆ Handy inch or millimeter scale on the back of the stock



No. 1025-6.

- ◆ Knurled thumb pieces to activate the slide
- ◆ Knurled clamp screw with a left hand thread for easy one-hand operation
- ◆ A slide stop prevents tool from being disassembled
- ◆ Straight measuring surface for outside measuring and rounded nibs for inside or hole measurements

Inch Reading

Size	Range		Depth of Jaws	Width of Nibs Closed	Graduations		Catalog No.	EDP No.
	Outside	Inside			Slide	Stock		
5"	0-3 3/4"	1/4-4"	1 3/8"	1/4"	32nds & 64ths	32nds	1025-5	53123
6"	0-4 3/4"	1/4-5"	1 3/8"	1/4"	32nds & 64ths	32nds	1025-6	53124

Inch and Millimeter Reading

5" (130mm)	0-3 3/4" or 0-96mm	1/4-4" or 6-100mm	1 3/8" or 36mm	.236" or 6mm	64ths & 1/2mm	millimeters	1025ME-130	65860
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CASES

Description	Catalog No.	EDP No.
5" and 130mm Vinyl Case	1025ZZ-5	55269
6" Vinyl Case	1025ZZ-6	55270

Available with protective vinyl case – sent without case unless otherwise ordered. Packed one in a box.

Stainless Steel Pocket Slide Caliper and Circumference Gage

No. 424 3 1/2"

This extremely handy caliper gives direct readings of both circumference and diameter in a single setting.

- ◆ Especially useful for obtaining instant circumference and diameter measurements of rope, cordage, metal rods, pipe, tubing, etc.
- ◆ Also for checking cutting speeds on lathe work. (Rule: Cutting Speed in Feet per Minute = Circumference divided by 12 x Revolutions per Minute.)



- ◆ The jaws are 1 3/8" deep and therefore will caliper a cylinder up to 2 3/4" diameter

- ◆ The upper edge of the slide is graduated from 0 to 11 circumference inches in 16ths and the lower edge from 0 to 3 1/2" standard measurement in 32nds

Size	Range		Graduations		Depth of Jaws	Catalog No.	EDP No.
	Dia.	Circumference	Dia.	Circumference			
3 1/2"	0-3 1/2"	0-11"	32nds	16ths	1 3/8"	424	51527

Packed one in a box.

Precision Measuring Equipment and Industrial Supplies since 1924.

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J.W. Donchin Co. was established in 1924 and has been known world wide ever since. Customer Service is our Main Focus. We offer **Expert Product Knowledge, Large Stocking Inventory and Competitive Pricing** to assist you in locating and selecting the correct tool or product to fit your needs. (J.W. Donchin Co. is one of L.S. Starrett's largest stocking distributors.)

Contact Information:

Phone: 773-261-2182

Fax: 773-261-2867

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