



HEIGHT GAGES



Starrett®

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

HEIGHT GAGES

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- ◆ Starrett Height Gages come in a variety of styles, sizes, readouts and accuracies to suit individual needs.
- ◆ Accuracies range from .000050" and 0.001mm on our Digi-Chek® Series to .001" and 0.03mm on our dial and vernier height gages.
- ◆ Standard height measurements are available to 85" or 2150mm. Higher measuring tools are available through the Special Order Department.
- ◆ Height Gages are normally used on a known flat surface such as our Granite Surface Plates (see Granite Surface Plate Section), where the work to be measured is brought to the plate.
- ◆ Some applications require the use of a height gage on a vertical plane. We offer practical lightweight tools such as our Nos. 751, 250, and 255 Series for these situations.
- ◆ All of our bases are hardened, ground, and lapped except the No. 252 base, which is not hardened. If these bases are moved rapidly on an extremely flat plate, there may be a tendency to "hum", since the two surfaces try to "wring" together. When the gage is brought to the work, it is a good practice to be sure the two surfaces are clean and to move the gage slowly.





Altissimo® Electronic Height Gages

No. 2000

No. 2001 “Platinum”

0-24" / 600mm

These electronic height gages are high on innovation and ease of use – loaded with the Starrett-exclusive functions you need to make your measuring routines run smoothly and reliably.

Features

- ◆ A unique, ergonomically shaped base, hardened and ground, that fits your grip just right to easily move the gage and press the ...
- ◆ Hot key that lets you select measuring results on the fly
- ◆ Smart probe that can measure I.D. or O.D. without attachments
- ◆ Electronically adjusted probe force
- ◆ Large, easy-to-read interactive LCD with unique scanning meter for monitoring probe position
- ◆ Electronically adjustable beeper volume
- ◆ Bold screen icons that always remind you of the current routine you are in
- ◆ Three electronically adjustable resolutions
- ◆ Retains the last calibrated diameter of the measuring probe, even after the gage is shut down
- ◆ Starrett capacitive measurement system ensures the accuracy and reliability you expect
- ◆ Excellent value – loaded with features and attractively priced



Users can quickly change between measuring routines by pressing the “hot key,” which is ergonomically integrated with the base.



(Continued on next page.)



Altissimo® Electronic Height Gages (continued)

No. 2000

No. 2001 "Platinum"

Features (continued)

- ◆ Dynamic bi-directional probing with point and scan modes
- ◆ Five measurement modes: (ID/OD, Center, TIR, Max/Min, Continuous Display)
- ◆ Automatic calculation of eight measurement routines:
 - Center
 - Diameter
 - Height
 - Max
 - Min
 - TIR
 - Distance to last feature
 - Distance between last two points
- ◆ Easy operation with speed wheel, which also has fine-adjust feature
- ◆ Locking mechanism for scribing
- ◆ Rechargeable NiMH batteries with 100 hours of continuous life
- ◆ Auto Power Off after two hours with retention of probe calibration
- ◆ Output data to Starrett SPC Plus® hardware and software and to PCs
- ◆ Instant inch/millimeter conversion
- ◆ Two selectable Datums and Preset
- ◆ Seven setup functions:
 - Probe Calibration (2)
 - Beeper Volume
 - Display Resolution
 - Probe Force Adjustment
 - Printer On/Off
 - Force Calibration
- ◆ Optional probe kit features a variety of probes for many applications
- ◆ Circular carbide scriber for smooth scribing
- ◆ 24" Gages are furnished with carbide probe, probe holder and probe calibration block as standard

Specifications:

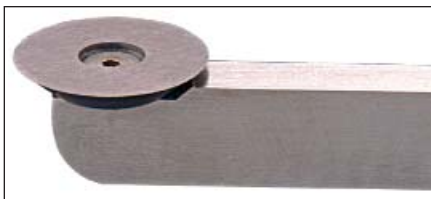
Measuring Range	24"/600mm (Extendible to 30"/750mm by rotating probe holder 180°)
Resolution	.0001"/.0005"/.001" (.002mm/.01mm/.02mm)
Accuracy	
No. 2000-24	±.0006" (.015mm)
No. 2001-24	±.0003" (.008mm)
Repeatability	±.0001" (±.002mm)
Power Source	NiMH Rechargeable Batteries (120V AC/60Hz Charger/Adaptor furnished) Operation time: 100+ hours, Recharging time: 10 hours
Standard Accessories Furnished	.1875"/4.8mm Dia. Carbide Probe, Probe Holder, AC Charger/Adaptor, Probe Calibration Block
Dimensions	Length 11" (279mm), Width 7 3/4" (197mm), Height 36 1/2" (927mm)
Weight	40 lbs. (18 kg)
Perpendicularity	.0004" (0.010mm)

Height Gages with Standard Components:

Description	Catalog No.	EDP No.
Height Gage	2000-24	67008
Height Gage, "Platinum"	2001-24	67453
Carbide Probe .1875" (4.8mm) Dia. (Standard)	PT27937	67009
Probe Holder (Standard)	PT27940	67010
Probe Calibration Block (Standard)	PT27944	67011

Accessories:

Accessory Set Includes:	S2000AZ	66997
Probe Tip, 5-Way Adaptor	PT27948	67012
.040" (1mm) Carbide Contact Point	PT23942	65255
.078" (2mm) Carbide Contact Point	PT23914	64222
.120" (3mm) Carbide Contact Point	PT23943	65256
Contact Wrench	PT27952	67013
.400" (10.2mm) Cylindrical Probe	PT27945	67014
Circular Carbide Scriber	PT27950	67015
Depth Gage Attachment	PT27949	67016
Holder for Dovetail Indicators	PT27946	67017
Replacement Battery Pack, NiMH 6V	PT62011	67018
Power Supply Charger for USA and Canadian Configuration	PT62015	67002
Power Supply Charger for United Kingdom Configuration	PT62130	67003
Power Supply Charger for European Configuration	PT62131	67004
Interface Adaptor for Starrett Tools to PC	PT61768	66454
Shielded Cable to Starrett Nos. 761/772 Series Starrett Modules and No. PT61768 Adaptor	PT62103	67019
Computer Interface Cable to PC	PT62425	67658



Circular Carbide Scriber, PT27950.



Electronic Height Gages

No. 3752 Series

The 3752 Electronic Height Gage is a full featured, versatile and economic solution for most height measurement applications.

All measuring information from these tools can be entered directly into Starrett Data Collection Systems for analysis, data collection and hard copy documentation. They are available in 0-12" and 0-24" ranges.

Readability and Control Features

- ◆ Clear bar graduations in .100" and 5mm increments
- ◆ Large (.380"/9.65mm), easy-to-read LCD display reads to .0005" or 0.01mm
- ◆ Instant inch-millimeter conversion
- ◆ Carrier and scribe designed to read from zero
- ◆ "Hold" control feature retains a reading at any position
- ◆ Plus or minus indication allows reading in proper direction
- ◆ Ability to set ZERO at any position
- ◆ Manual on/off plus a built-in automatic off after 30 minutes of non-use

Full Function Action Features

- ◆ Large positive action keypad
- ◆ Easy keyboard control by use of the SHIFT button
- ◆ Ability to retain and return to the true zero reading of the height gage
- ◆ PRESET button to install any reading at any position
- ◆ Ability to install minimum and maximum limits
- ◆ Output jack allows data transmission, either through a cable or by connecting to a Starrett DataSure™ Wireless Data Collection System end node
- ◆ The output jack allows data transmission to the following peripherals for analysis, data collection and hard copy documentation
 - Starrett No. 772 Data Collection Systems
 - Starrett No. 761 Data Multiplexers
 - Other devices that support RS232

Battery Life

- ◆ 1 1/2+ years battery life. Two 3-volt batteries furnished (CR2459)



Above: Closeup of simple yet powerful gage controls.

Right: No. 3752, 0-12" Height Gage

Far right: No. 3752, 0-24" Height Gage



Specifications

Resolution	.0005" (0.01mm)
Graduations	.100" (5mm)
Overall Accuracy	±.0015" (.04mm) 0-18" (0-450mm) ±.002" (.05mm) 18-24" (450-600mm)
Battery Life	Over 1 1/2 Years Average Use

Range	Description	Catalog No.	EDP No.
0-12" (300mm)	Height Gage without Case	3752-12/300	68815
0-24" (600mm)		3752-24/600	68816

Cables, Accessories, Cases

Description	Catalog No.	EDP No.
Shielded Cable to Starrett Nos. 761/772 Series Modules, No. PT61768 Adaptor	PT62103	67019
Interface Adaptor for Starrett Tools to PC	PT61768	66454
3-Volt Battery, No. CR2450 (2) Required	PT61120	65446
Wood Case Only for 12" Gage	928	55249
Wood Case Only for 24" Gage	945	56684

Furnished without case unless otherwise ordered.



Electronic Height Gage (with output)

No. 751 0-6" / 150mm

This height gage is light, portable and easy to use for vertical measurements within its range, and includes data output.

Readability Features

- ◆ Clear, easily read numbers, properly sized for the tool

Accuracy and Long Life Design Features

- ◆ Hardened, stainless steel bar for long life
- ◆ Depth attachment No. PT08680A available for measuring depth of holes, slots, and recesses
- ◆ Fine adjustment thumb roll for precision measurements
- ◆ Rounded nose scribe cuts clean, sharp lines with smoothness and less pressure
- ◆ Lock to hold the slide in position
- ◆ Hardened, ground, and lapped base with finger grooves provides ease of movement
- ◆ One-year minimum battery life with two furnished 3-volt batteries, No. CR2032
- ◆ Vertical bar is back from the edge of the nose for better stability
- ◆ Scribe can reference zero from the bottom of the base to get the full 6" (150mm) usable range
- ◆ Linear Accuracy: $\pm .001"$ ($\pm 0.03\text{mm}$)
- ◆ Resolution: $.0005"$ (0.01mm)

Action Features with Five Control Buttons

- ◆ Inch-millimeter conversion
- ◆ Zero at any position
- ◆ Hold readout at any position
- ◆ Manual ON/OFF plus a built in automatic OFF after 15 minutes of nonuse
- ◆ Exclusive shift button allows for easy use of more functions
- ◆ LIMITS button allows high and low limits to be set. Out of limits readings will show a flashing display
- ◆ Output jack allows data transmission, either through a cable or by connecting to a Starrett DataSure™ Wireless Data Collection System end node
- ◆ The output jack allows data transmission to the following peripherals for analysis, data collection and hard copy documentation
 - Starrett No. 772 Data Collection Systems
 - Starrett No. 761 Data Multiplexers
 - Other devices that support RS232

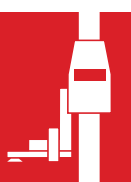


0-6"/150mm range

Catalog No.	EDP No.	Description
751Z-6/150	65661	Height Gage, in Case
751-6/150	65665	Height Gage, without Case

Accessories and Cables

PT08680A	51383	Depth Attachment
PT61963	66636	Computer Interface Cable Complete to IBM-PC (RS232C)
PT61768	66454	Adaptor from PT22938 Cable to IBM-PC (RS232C)
PT22938	64059	Shielded Cable from 751 Series to Starrett 772 Modules and PT61768 Interface Adaptor
PT99492	65650	Two 3-Volt Batteries, No. CR2032
947	56756	Wood Case Only



Digital / Dial Height Gage

No. 259 0-24"

This is one of the fastest and most reliable height gages for its range (24") and accuracy (within .001" at any location).

Readability Features

- ◆ Read the clear, properly sized counter for inches and tenths of an inch (e.g. 4.2")
- ◆ Next read directly to .001" on the dial, which has 100 sharp, clear graduations
- ◆ Ability to reset the measurements to zero at any point on the dial
- ◆ Reset can be for the up or down direction as desired
- ◆ The scriber and base are designed so that the tool will read directly from zero (the bottom of the base)

Ease-of-Handling Features

- ◆ Quick adjustment with a large speeder-type knob on the base
- ◆ A convenient, fine adjusting knob on the top of the bar for ease of positioning
- ◆ Slide lock to hold the measurement and increase stability for scribing
- ◆ Hardened, ground, and lapped vibration-proof base with finger grooves for ease of movement
- ◆ Rugged and well balanced – the vertical bar is positioned near the center of the base (not at its edge) for stability
- ◆ Versatile tool will scribe lines, mount dial indicators or electronic probes, and use depth attachments in the scriber holder
- ◆ Circular carbide scriber – cuts sharp, clean lines smoothly – rotatable for wear – a Starrett original

Specifications

Resolution	
Dial	.001"
Digital Counter	.1"
Accuracy	±.001"
Repeatability	±.0005"
Dimensions	30.5" H x 5" W x 9" L

Gage is furnished with auxiliary scriber and scriber carrier. Longer auxiliary scriber available. See scriber selections at the end of this section. Packed one per box, without case. Case available by ordering No. 945.

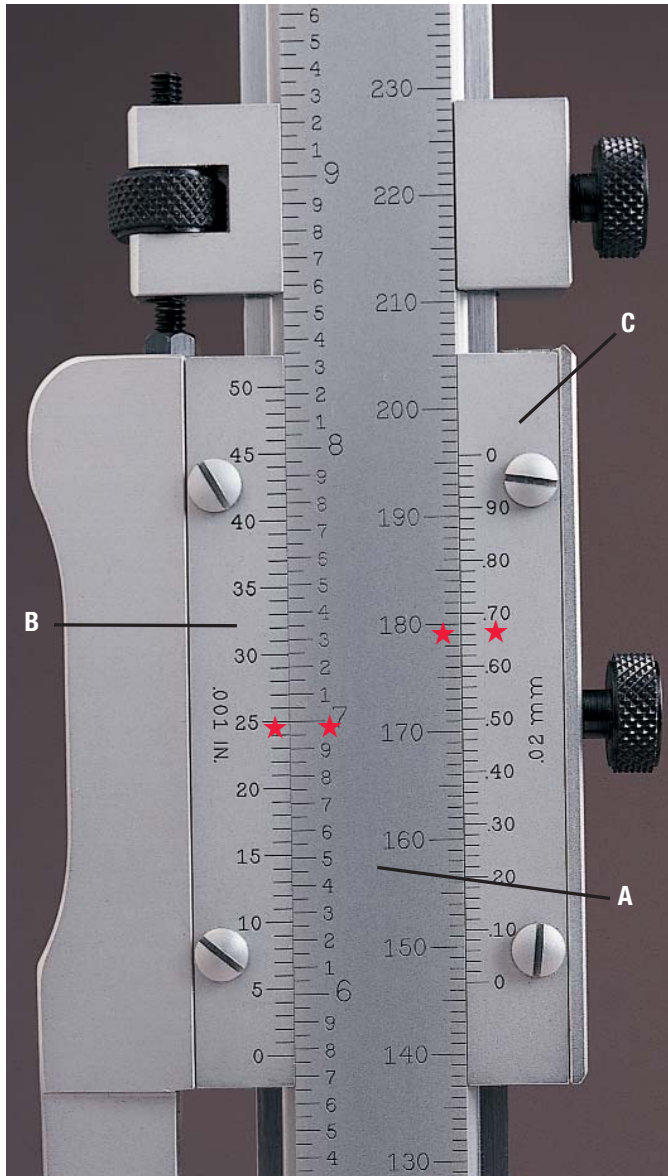


0-24" range

Catalog No.	EDP No.	Description
259-24	56659	Height Gage with Scriber, Scriber Carrier
945	56684	Wood Case Only
PT27724	67185	Circular Carbide Scriber
PT99205	71920	Scriber Carrier



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



Open-face long Vernier with 50 widely spaced graduations for easy reading. Flush-fitting Vernier and master bar eliminates parallax.

A. Master Bar
B. Inch Vernier Plate
C. Millimeter Vernier Plate

Inch Reading

- ◆ Refer to the left side 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 ... 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

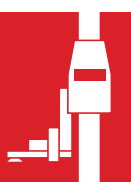
- ★ In the photo, the vernier plate zero line is five inches (5.000") plus .750" beyond the zero line on the bar, or 5.750". The 25th graduation on the vernier plate coincides with a line on the bar (as indicated by stars). $25 \times .001$ (.025") is therefore added to the 5.750" bar reading, and the total reading is 5.775"

Millimeter Reading

- ◆ Refer to the right side bar graduations and millimeter vernier plate. Each bar graduation is 1.00mm. Every tenth graduation is numbered in sequence – 10mm, 20mm, 30mm, 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 146 millimeters beyond the zero line on the bar, and the 0.68mm graduation on the vernier plate coincides with a line on the bar (as indicated by stars). 0.68 millimeters is therefore added to the 146 millimeter bar reading, and the total reading is 146.68 millimeters



Master Vernier Height Gages

No. 254 Series 0-72"

No. 254M Series
0-900mm

No. 254EM Series
0-24" / 0-600mm

This Master Vernier Height Gage is the ultimate in height gage design and is the experienced craftsman's friend. It is a rugged and reliable tool that gives precise and dependable measurements over long ranges. This tool is accurate, has the easiest reading vernier style, is stronger, and is offered in greater ranges than other height gages.

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 needing 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
- ◆ Black lines and figures against Starrett satin chrome finish make reading a pleasure, not an effort
- ◆ The scribe and base are designed for direct reading from zero (bottom of base)

Ease-of-Handling Features

- ◆ Quick-adjust release on the slide allows for fast positioning
- ◆ Extremely fine adjustments are achieved by a knob located on the base, thereby isolating the column and slide from external pressures
- ◆ Additional remote fine adjustment located on top of the bar for sizes 36" (900mm) and larger – convenient feature when working in higher ranges
- ◆ Special master bar design and the balanced design and weight of the base eliminates vibration – especially helpful with fully extended scribes
- ◆ Master bars on models up to 24" and 600mm are hardened and stabilized
- ◆ Base is hardened, ground, and lapped square with the bar and has finger grooves to provide ease of movement

- ◆ The vertical bar is positioned near the center of the base for balance and stability
- ◆ Versatile tool will scribe lines, mount dial indicators or electronic probes, and accept depth attachments
- ◆ Tool can also be used with our No. 359 Protractor for checking angles
- ◆ The auxiliary scribe is a circular carbide scribe – cuts sharp, clean lines smoothly – rotatable for wear – a Starrett original





Specifications No. 254 Series



Quick-adjusting screw release permits rapid adjustment of slide to approximate setting followed by precise positioning with fine adjustment knob.



Precise positioning with fine-adjustment knob on the base, isolating the column and slide from external pressures.

Inch Reading – Graduation – .001"

Range	Approximate Base Dimensions	Catalog No.	EDP No.
0-12"	5 7/8" x 3 7/8"	254Z-12	51219
0-18"	7 1/2" x 4 1/2"	254Z-18	51220
0-24"		254Z-24	51221
0-36"		254Z-36	51222
0-48"		254Z-48	51223
0-60"		254Z-60	56183
0-72"		254Z-72	56184

Millimeter Reading – Graduation – 0.02mm

0-300mm	150mm x 95mm	254MZ-300	56214
0-450mm	190mm x 115mm	254MZ-450	56215
0-600mm		254MZ-600	56216
0-900mm	250mm x 165mm	254MZ-900	56217

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

0-12"/300mm	(See Above)	254EMZ-12	51224
0-18"/450mm		254EMZ-18	51225
0-24"/600mm		254EMZ-24	51226

NOTES:

- ◆ Hardened bars on all sizes through 24" and 600mm
- ◆ Different length carbide scribes available – see scribe selection page near the end of this section.
- ◆ Depth Gage Attachment PT05409A, EDP 51227, available for all sizes through 24" and 600mm

Gage is furnished with scribe, in attractive, protective case. Packed one in a box.



Vernier Height Gages

No. 255 Series 0-18"

No. 255M 0-300mm

No. 255EM 0-18" / 0-450mm

This tool is the "baby brother" of the No. 254 Master Vernier Height Gage. It is essentially the same tool, but a much lighter version for normal use where heavy duty applications are not practical. The 18" and 450mm models weigh 3 1/4 lbs. (1.5kg). No other height gage features this favorable combination of design, weight and accuracy.

Readability Features

- ◆ Long, 50-division vernier scales that can be read to .001" or 0.02mm without a magnifying glass
- ◆ Flush-fitting of the vernier scales to the main scale eliminates parallax
- ◆ Easy-reading sharp black lines and figures against Starrett satin chrome finish background
- ◆ The scribe and the base are designed so that the gage will read directly from zero

Ease-of-Handling Features

- ◆ Slides easily for quick adjustment and has a screw type adjusting nut on the bar for precise positioning
- ◆ The design of the hardened and stabilized bar plus the balanced design and weight of the base eliminate vibration
- ◆ The base is hardened, ground, and lapped and is hand shaped for sure grip and easy movement
- ◆ The vertical bar is positioned near the center of the base for balance and stability
- ◆ Ability to scribe lines, measure with dial indicators or electronic probes and accept depth attachments
- ◆ The auxiliary scribe is a circular carbide scribe – cuts sharp, clean lines smoothly – rotatable for wear – a Starrett original

Inch Reading – Graduation .001"

Range	Bar Approximate (W x Thick)	Base Approximate (L x W)	Description	Catalog No.	EDP No.
0-12"	15/16" x 7/32"	4 7/16" x 2 9/32"	In Case	255Z-12	51229
			Without Case	255-12	51230
0-18"			In Case	255Z-18	51231
			Without Case	255-18	51232

Millimeter Reading – Graduation 0.02mm

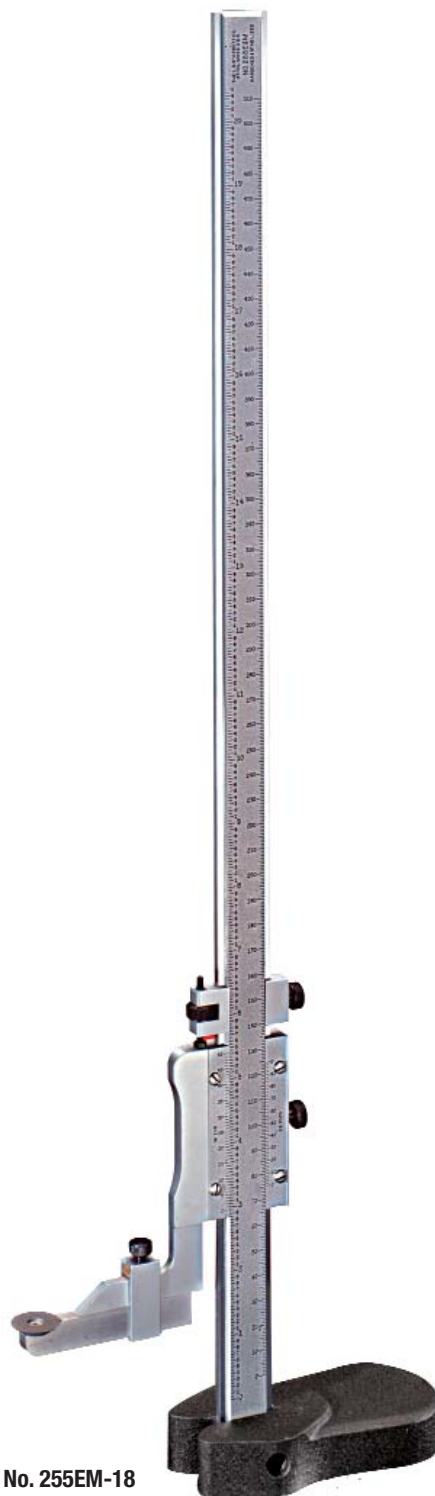
0-300mm	24mm x 5.5mm	113mm x 58mm	In Case	255MZ-300	56218
			Without Case	255M-300	56219

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

0-18"/450mm	15/16" x 7/32" (24mm x 5.5mm)	4 7/16" x 2 9/32" (113mm x 58mm)	In Case	255EMZ-18	65160
			Without Case	255EM-18	65161

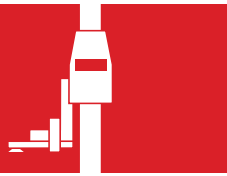
NOTES: Carbide Scribe PT27710 (EDP 67187) available 3/16" x 25/64" x 2 3/4" (4.8mm x 10mm x 70mm)

Depth Gage Attachment PT08962A (EDP 51233) available



No. 255EM-18

Furnished with Auxiliary Scribe, packed one in a box.



Dial Height Gages

No. 250 0-6"

No. 250M 0-150mm

This compact height gage has universal appeal for virtually all machinists and inspectors. It is simple to use, reliable, accurate, and fits into most toolboxes.

Readability Features

- ◆ Sharp, clear dial graduations of .001" or 0.02mm – .100" or 2mm in one revolution
- ◆ Sharp, black graduations on the satin chrome finished bar every .100" or 1mm

Ease-of-Handling Features

- ◆ Fine adjustment thumb roll for precision measurements
- ◆ Vertical bar is back from the edge of the nose for better stability
- ◆ Hardened, ground, and lapped base with finger grooves for control and ease of movement
- ◆ Base is designed so the gage can read from the zero position up to the full 6" (150mm) range
- ◆ Tool scribes lines, measures with test indicators, and can also be used with a depth attachment
- ◆ Lock screw for dial
- ◆ Lock to hold the slide in position
- ◆ The auxiliary scribe has a rounded nose for cutting clean, sharp lines with smoothness and less pressure. This is an original Starrett feature

Accuracy and Long-Life Features

- ◆ Hardened, stainless steel bar, rack, gears, scriber, and scriber carrier
- ◆ Positive split gear anti-backlash control



0-6" range

Catalog No.	EDP No.	Graduation	Description
250-6	56699	.001"	Height Gage Without Case
250Z-6	56703	.001"	Height Gage In Case

0-150mm range

250M-150	64274	0.02mm	Height Gage Without Case
250MZ-150	64277	0.02mm	Height Gage In Case

Accessories

PT08680A	51383		Depth Attachment
947	56756		Wood Case Only

Furnished with Auxiliary Scriber and Scriber Carrier. Packed one in a box.



DIGI-CHEK™ II Height Master

No. DHG Series

Ranges up to 85" and 2150mm

These are the world's fastest and most precise height masters, ideal for those who need the highest degree of accuracy over an extremely long vertical range.

- ◆ Can be used in the laboratory or on the shop floor
- ◆ Lower inspection cost by saving time – within 10 seconds the tool can be set into position
- ◆ The gage block stack is free-standing, so it will adapt to temperature differences in a reasonable time period
- ◆ 1" or 25mm range of adjustment
- ◆ Reverse reading block allows readings from the underside of the master gage blocks
- ◆ The large, remote digital readout can be placed in the most convenient location and adjusted for best readability
- ◆ The housing is heavy and extremely stable. It has hardened and lapped three-point bearings

1-85" range

Capacity	Catalog No.	EDP No.
1-25"	DHG 25.	93265
1-37"	DHG 37.	93266
1-49"	DHG 49.	93267
1-61"	DHG 61.	93268
1-73"	DHG 73.*	93269
1-85"	DHG 85.*	93270

25-2150mm range

25-625mm	DHG 625.	93271
25-1025mm	DHG 1025.	93272
25-1225mm	DHG 1225.	93273
25-1550mm	DHG 1550.	93274
25-1800mm	DHG 1800.*	93640
25-2150mm	DHG 2150.*	93275

*Setup charge extra depending on location.

Standard equipment: pedestal stand for readout unit, DIGI-CHEK II plastic dust cover and wood shipping/storage case.

Note: The accuracy of the surface that supports the gage must be taken into account when determining the accuracy of any measurements.



Simple, two step operation in less than 10 seconds. 1. Set rapid positioner (A) to within .005" (0.15mm) (3 seconds). 2. Final setting (5 seconds).

Optional Equipment

Catalog No.	EDP No.	Description
HG 525.60 (Inch)	92579	Reverse Reading Blocks
HG 501.3M (Millimeter)	91486	
HG 525.61 (Inch)	92577	One inch or 25mm base blocks for use with reverse reading blocks to set dial bore gages
HG 501.4M (Millimeter)	91487	
CS 9133.	92320	Finished wood case for reverse reading and base block

Specifications

Description	Inch System	Metric System
Tolerance (Stack) Maximum: Minimum:	expressed in μ in. 2.5L + 10 L in inches - 10	expressed in μ m .0025L + .25 L in mm - .25
Parallelism: Gage Surfaces to Base and Each Other	15 μ in.	0.4 μ m
Resolution	10 μ in. or 20 μ in.	0.5 μ m or 1.0 μ m
Repeatability of Readout	± 20 μ in.	0.5 μ m or 1.0 μ m
Digital Readout	1/2" high figures	12.5mm
Readout Pedestal Height	38"	970mm
Power Supply	Switchable: 115 V 60 Cycle or 220 V 50 Cycle	
Certificate of Calibration (Extra Cost)	expressed in μ in.	expressed in μ m
Uncertainty of Calibration of Stack	10 + 2.0L L in inches	.25 + .002L L in mm
Uncertainty of Calibration of Readout	± 30 μ in.	± 0.75 μ m

μ = .000001 x unit of measure



DIGI-CHEK™ Height Gages

No. 258 Series
.100"-24.100"

No. 258M Series
2-602mm

These gages combine the accuracy of Starrett-Webber Gage Blocks with a precision micrometer head and digital readout.

Readability Features

- ◆ Satin chrome scales mounted beside the gage block column for quick reference to the nearest 1" or 25mm reading
- ◆ Digital readout reads in .001" or 0.01mm and has a range of 1" or 25mm
- ◆ Reads directly from the micrometer head to .0001" or 0.002mm. The micrometer head (our No. 469) has black figures on the satin chrome thimble. The graduations are staggered for easy counting
- ◆ Both the micrometer head and digital readout are mounted on top of the gage, directly in line with the operator's vision

Ease-of-Handling Features

- ◆ The micrometer head has a speeder knob for rapid positioning
- ◆ Both over and under heights can be checked directly from the gage blocks in a single setting. Because reference surfaces are provided on the top and bottom of each block, adjacent blocks are in the exact same plane. This eliminates the need to add or subtract block thickness.
- ◆ Readings can also be taken from either left, center, or right of the gage block column
- ◆ Parts can be checked from .100" or 2mm in height
- ◆ The gage block column design permits wringing a 1" block between two blocks in the column. This is convenient for setting and checking other gages such as inside micrometers, end measuring rods, dial bore gages, etc.

Accuracy and Long-Life Features

- ◆ Gage is housed in a heavily flanged frame for stability and the base has three-point hardened, ground, and lapped bearing pads, making it virtually tip-proof

- ◆ Gage blocks are assembled in a free-standing system that allows the blocks to conform to temperature variations independently of the frame, thereby reading the same as the workpiece
- ◆ The highly accurate micrometer spindle is one piece, with the measuring threads ground from the solid, hardened and stabilized
- ◆ A 10" riser block is available for increased height capacity

NOTE: The accuracy of the surface that supports the gage must be taken into account when determining the accuracy of any measurements.



.100"-24.100" range

Range	Graduation			Gage Accuracy	Catalog No.	EDP No.
	Scales	Digital Readout	Micrometer Head			
.100"-12.100"	Inches	.001"	.0001"	±.0002"	DHG12-258	93005
.100"-18.100"		.001"	.0001"	±.0002"	DHG18-258	93006
.100"-24.100"		.001"	.0001"	±.0002"	DHG24-258	93357

2-602mm range

2mm-302mm	Millimeters	0.01mm	0.002mm	±.005mm	DHG300-258	93007
2mm-452mm		0.01mm	0.002mm	±.005mm	DHG450-258	93008
2mm-602mm		0.01mm	0.002mm	±.005mm	DHG600-258	93358

NOTES: Finished wood case for 12" (300mm) and 18" (450mm) also available, at extra cost. These finished wood cases are NOT suitable for shipping. Use suggested shipping materials. Certificate of Calibration available at extra cost. See page 127 for Riser Blocks and Reverse Reading Blocks. Questions and repair regarding Digi-Chek gages should be referred to the Starrett-Webber Division, Tel.: 440-835-0001.



Height Transfer Gages

No. 252 Series

0-48" / 0-1200mm

The Starrett No. 252 Height Transfer Gage is ideal for use with test indicators or electronic amplifiers to accurately transfer height settings from gage blocks, height gages and other standards.

Accuracy and Long-Life Features

- ◆ Extreme rigidity provides the vibration-proof stability necessary to permit precise, repeat readings with indicators of the highest amplification
- ◆ Extremely rigid, rectangular box-type hollow column mounted integrally on a heavy base
- ◆ Adjusting mechanism is located in the base so the column and indicator are isolated and not affected by external factors, i.e. heat or hand pressure

Ease-of-Operation Features

- ◆ Hand-fitting base design for sure-grip handling and easy movement
- ◆ Bottom of the base has three ground and lapped pads for stability and smooth movement on the surface plate
- ◆ Adjustable slide, incorporating a snug for holding test indicators or electronic gage heads, has rapid vertical manual adjustment
- ◆ Thumb screw allows slide to be locked
- ◆ Knob on base allows fine vertical adjustment of the slide unit relative to the fixed column. This permits the slide with its test indicator to be quickly and precisely adjusted to the desired setting

Tool and Gaging Holders

- ◆ A snug on the slide provides two holes (.375" [9.5mm] and .156" [4mm]) for holding gage rods or scribers. A 9" (225mm) rod furnished with the gage is especially useful for reaching confined areas or reaching heights greater than the range of the gage
- ◆ The rod has a major diameter of .375" (9.5mm) and stepped diameters of 1/4" (3.2mm) and 7/32" (5.5mm) at one end and 5/16" (8mm) at the opposite end. Starrett No. 708 and 709 Test Indicators can be mounted on this rod using Starrett No. PT22428 swivel clamp. Starrett No. 196 Universal Back-Plunger Indicators can be mounted using Starrett snugs, Part Nos. PT18718 or PT18724 (snugs not furnished)
- ◆ No. PT06784-A Gage Holding Rod is



- included to accommodate the Starrett No. 715-1 Gaging Head when the Transfer Gage is used with the No. 717 Electronic Gage. A wire retaining clip keeps electronic gage head cables from deflecting the gage-holding rod
- ◆ Starrett No. 25, No. 81, No. 655 and No. 656 Series Dial Indicators also can

be used on the height gage by means of a No. PT06784-A Gage Rod (furnished). Other useful attachments (extra) are Starrett surface gage spindles (No. 57C or No. 57D, 12" [300mm] and 18" [450mm]) – which are extremely useful for scribing and layout

Range	Fine Adjustment (Approximate)	Base Size (Approximate)	Gage Rod Dimension	Catalog No.	EDP No.
0-14" (350mm)	3/8" (9.5mm)	5 3/4" L x 3 1/2" W (145mm x 90mm)	9" L x .375" Dia. (225mm x 9.5mm) with steps	252Z-14	55890
0-24" (600mm)		7 1/2" L x 4 1/2" W (190mm x 115mm)		252Z-24	51216
0-48" (1200mm)		9" L x 6" W (225mm x 150mm)		252Z-48	51217

NOTE: Larger sizes available on special order.

Starrett Nos. 708, 709, 711, 650 Test Indicators; Nos. 25, 81, 196, 655, 656 Dial Indicators and supplementary attachments also available.

Gage furnished with 9" (225mm) Rod and No. PT06784-A Gage Holding Rod in wood case. Packed one in a box.



Depth Gage Attachments for Height Gages



Right: No. PT08680A.
Middle: No. PT08962A.
Left: No. PT05409A.

These attachments replace standard scribes and measure the depths of holes and slots, recesses; inside of jigs, fixtures; and over high projections.

They have adjustable rods which are held in the desired position by a knurled binding nut. The ends have a slight radius for point contact on the work.

Rod Length	Fits Starrett Height Gage No./Size	Part No.	EDP No.
6" (150mm)	No. 255 8", 12", 18", 300mm, 450mm	PT08962A	51233
8" (200mm)	No. 254 12", 18", 24", 300mm, 450mm, 600mm and all Metric & English Series No. 259 18" and 24", No. 3752 12" (300mm) and 24" (600mm), No. 755 24" (600mm)	PT05409A	51227
6" (150mm)	Nos. 250, 751	PT08680A	51383

DIGI-CHEK Height Gage Accessories for No. 258 Series

Reverse Reading Blocks

No. 258RRB (Inch)

No. 258RRBM (Millimeter)

Used on No. 258 Digi-Chek™ Height Gages for the precise calibration of working gages and for setting dial bore gages. The block fits in alternate inch positions, its tongue entering the odd numbers and its groove entering the even numbers of the gage block stack.

Packed one in a box.



Catalog No.	EDP No.	Description
HG 258.RRB	92433	Fits 12", 18" and 24" Gages
HG 258.RRBM	92434	Fits 300mm, 450mm and 600mm Gages

Riser Blocks

No. 258R Series (Inch)

No. 258MR (Millimeter)

Increases the range of Inch reading No. 258 Digi-Chek™ Height Gages by 10" and metric reading No. 258 Digi-Cheks by 250mm. Heavily flanged for rigidity and stability. Both top and base have three ground and lapped pads to match the pads on the Digi-Chek base. Retaining plate prevents the Digi-Chek from being pushed or sliding off the pads. Attractive black wrinkle finish. If desired, riser blocks can be stacked one on top of another.

Packed one in a box.

10" Blocks

Cat. No.	EDP No.	Accuracy	For:
HG 258.R	99865	±.000040"	12" gage
HG 258.RA	99866		18" gage

250mm Blocks

Cat. No.	EDP No.	Accuracy	For:
HG 258.MR	99867	±0.001mm	300mm
HG 258.MRA	99868		450mm gage





Straight Scribers for Starrett Height Gages

All steel scribers are hardened to approximately HRC 62 and have a rounded tip (a Starrett original) which cuts sharp, clear lines smoothly, with less pressure, on any material.



Part No.	EDP No.	Point	Size	Fits Starrett Height Gage No./Size
PT22090	64507	Hardened Tool Steel	5/16" x 1/8" x 1 3/4" (8 x 3.2 x 45mm)	Nos. 250, 751 and Starrett No. 995 Universal Precision Gage
PT14343	71511	Hardened Tool Steel	1/4" x 1/2" x 3" (6.4 x 12.7 x 75mm)	No. 254 12", 18", 24", 300mm, 450mm, 600mm No. 254 Metric & English Series No. 259 18" and 24"
PT13816	52367		1/4" x 1/2" x 6" (6.4 x 12.7 x 150mm)	
PT13817	52368		1/4" x 1/2" x 10" (6.4 x 12.7 x 250mm)	
PT16566	72288	Hardened Tool Steel	5/8" x 3/8" x 3 5/8"	No. 254 36", 48", 900mm
PT13791	71460	Hardened Tool Steel	3/16" x 25/64" x 2 3/4" (4.8 x 10 x 69.9mm)	No. 255 8", 12", 18", 300mm, 450mm

Circular Carbide Scribers

- ◆ Cuts a sharper and cleaner line with less pressure than any other scriber
- ◆ Resists breakage and chipping but can be rotated for wear
- ◆ Another Starrett original



Part No.	EDP No.	Point	Size	Fits Starrett Height Gage No./Size
PT27724	67185	Circular Carbide	1/4" x 1/2" x 3" (6.4 x 12.7 x 75mm)	No. 254 12", 18", 24", 300mm, 450mm, 600mm No. 254 Metric & English Series No. 259 18", 24"
PT27708	67186		1/4" x 1/2" x 6" (6.4 x 12.7 x 150mm)	
PT27710	67187		3/16" x 25/64" x 2 3/4" (4.8 x 10 x 69.9mm)	No. 255 8", 12", 18", 300mm, 450mm
PT27950	67015		1/4" (6.4mm) Diameter Shank	Nos. 2000, 2001 Altissimo
PT28131	67007		1/4" x 7/16" x 3" (6.4 x 11.1 x 75mm)	Nos. 3752

Stem-Mount Indicator Attachment for Height Gages

This attachment replaces the standard scriber and provides a way to mount dial indicators or LVTD style probes having 3/8" diameter shafts onto your height gage. By using the lower stem of the indicator as an attachment point, the indicator can be used to guarantee the amount of down pressure on the part is the same as the original set zero position.



Description	Part No.	EDP No.
Stem-Mount Indicator Attachment	PT99441	52991

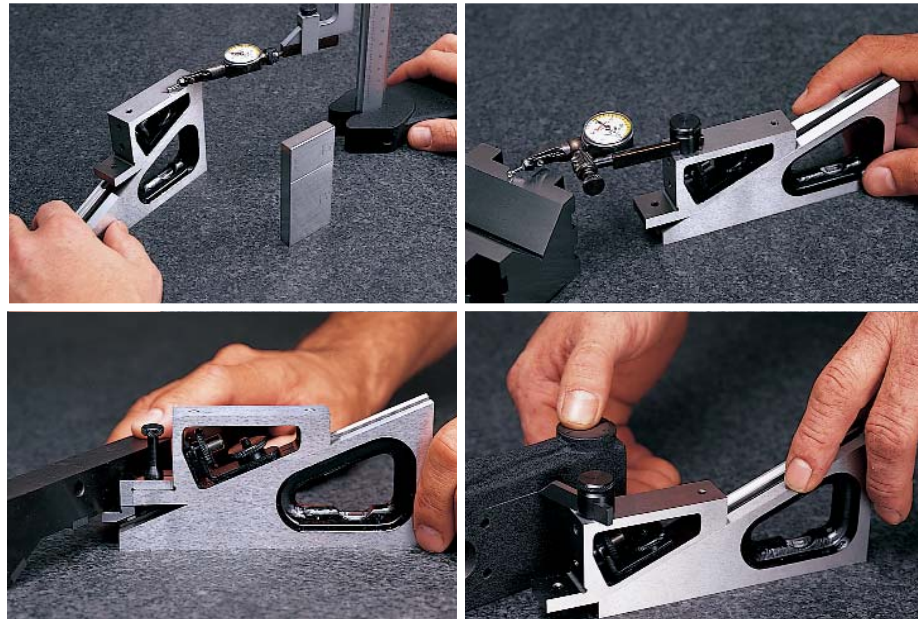
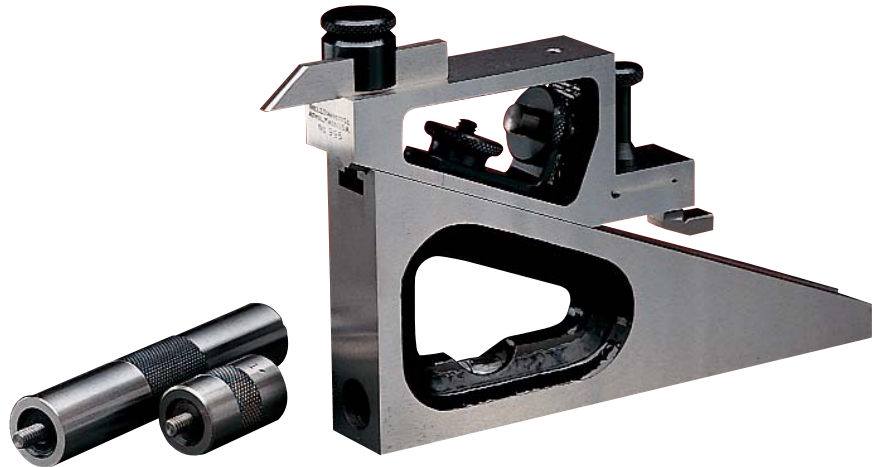


Universal Precision Gage

No. 995 10 1/4" (260mm)

This versatile gage was specifically designed for gage makers, inspectors, tool and die makers and machinists. There is no other similar gage available that combines the design, accuracy and usefulness of this tool for fine height setting and transfer within its range.

- ◆ Features and attachments that make this a truly universal gage are – Scriber Attachment that can be used as a height gage for comparison measuring with test indicators, or as a surface gage for scribing – an offset attachment or “foot” that permits setting in narrow areas or working 1/8" (3.2mm) below the base line – and 1" (25.4mm) and 3" (76.2mm) extensions to increase the measuring range
- ◆ Gage has a stable width-to-length ratio of 3/4" (19mm) wide and 5 1/4" (130mm) length
- ◆ Base and slide forgings are hardened and all working surfaces are accurately ground
- ◆ The exclusive combination flat and “V” ways on the slide and base provides extreme accuracy, and the three-point contact provides longitudinal movement without side play
- ◆ A fine adjustment for closer accuracy and faster settings eliminates slow, tedious tapping to set the gage. There is no other similar gage with this important feature
- ◆ Applications – Can be used as a height gage, scriber, planer and shaper gage, for gap measurement, as an adjustable parallel, for transferring settings with indicators, for checking and layout work on surface plates, and with gage blocks or sine bars
- ◆ Works as a precision level for use in machine set ups and gage work
- ◆ In all these applications flush surfaces permit use on the base, the end, the top of the slide and either side



Range With 3" and 1" Extensions	Range Without Extensions
10 1/4" (260mm)	6 1/4" (158mm)

Catalog No.	EDP No.	Description
995AZ	53104	Gage with 3" Extension, in Case
995A	53105	Gage with 3" Extension, without Case
995B	53106	Scriber and Scriber Holder Only
995D	53109	Offset Attachment with Clamp Bolt
995EZ	53110	Complete – Nos. 995A, B, D, PT03476, in Case
995E	53111	Complete – Nos. 995A, B, D, PT03476, without Case
PT07127	52941	Attachment for Holding Starrett No. 711 Last Word® Dial Test Indicators
PT22090	64507	Straight Scriber Only
PT03476	70486	1" Extension Only
PT07236	70969	3" Extension Only

NOTE: 25mm extension also available on special order.



Planer and Shaper Gage

No. 599 10 1/4" (260mm)

This gage is similar to our No. 995 Gage except that it has a different slide with no fine adjustment and no attachments.

- ◆ It has the same exclusive flat and “V” three point way design
- ◆ All working surfaces are hardened and ground to the same close tolerance as the No. 995
- ◆ Tool has the same stable base 3/4" W x 5 1/4" L (19 x 130mm) as the No. 995



Range With 3" and 1" Extensions	Range Without Extensions
10 1/4" (260mm)	6 1/4" (158mm)

Catalog No.	EDP No.	Description
599	52627	Gage with 3" Extension
PT03476	70486	1" Extension Only
599ZZ	55241	Case Only

NOTE: 25mm extension also available on special order

Packed one in a box. Sent without case unless otherwise ordered.

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

Email: sales@jwdonchin.com

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