

## Mitutoyo Quality <br> 

## Precision Tools \& Instruments

Prices effective September 8 - December 12, 2014


## Dear Valued Customers,

With our 50th Anniversary celebration behind us at Mitutoyo America Corporation, we are now assisting our parent company, Mitutoyo Corporation, in the celebration of their 80th Anniversary. Throughout the year there will be special promotions, events, and other activities occurring to publicize the anniversary.

It is important for us to take this opportunity to personally thank the companies and individuals who partner with us, for their continued support and commitment as we help Mitutoyo Corporation celebrate 80 years of excellence.

The Fall Promotion is our second large scale Precision Tool Promotion of 2014 and will be effective from September 8, through December 12, 2014.

Please check our website at www.mitutoyo.com to watch for other exciting events developing at Mitutoyo during our year of celebration.

Sincerely,


Shigeyuki Sasaki
President, Mitutoyo America
Corporation


Mitutoyo Corporation
80th Anniversary Since 1934

MDC Micrometers


Features

- New electromagnetic ABSOLUTE sensor - Improved resistance to environmental conditions such as dirt, oil and water that can cause false readings
- New ratchet thimble models improve one-hand operability
- New Anti-slip finish for improved grip while taking measurements

MDC Lite
293-832-30

- Long battery life - 2.4 years under normal operation
- Fully compatible with existing Mitutoyo Digimatic peripherals (SPC Cables, U-Wave wireless transmitters, DP1-VR...etc) - SPC output enabled IP65 Models
- Function-lock system prevents inadvertent setting changes


Improved operability with


| Order No. | Range | Resolution | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| IP65 - With SPC Output |  |  |  |  |  |
| 293-330-30 | 0-1"/0-25.4mm | . 00005 "/0.001mm | Ratchet Stop, | \$240.00 | \$228.00 |
| 293-335-30 | 0-1"/0-25.4mm | . 00005 "/0.001mm | Friction Thimble | \$240.00 | \$228.00 |
| 293-331-30 | 1-2"/25.4-50.8mm | . 00005 "/0.001mm | Ratchet Stop w/Standard | \$283.00 | \$268.85 |
| IP65-Non-SPC Output |  |  |  |  |  |
| 293-340-30 | 0-1"/0-25.4mm | . 00005 "/0.001mm | Ratchet Stop | \$178.00 | \$169.10 |
| 293-344-30 | 0-1"/0-25.4mm | . 00005 "/0.001mm | Ratchet Thimble | \$178.00 | \$169.10 |
| 293-348-30 | 0-1"/0-25.4mm | . 00005 "/0.001mm | Friction Thimble | \$178.00 | \$169.10 |
| 293-349-30 | 0-1"/0-25.4mm | . 0001 "/0.001mm | Ratchet Thimble | \$178.00 | \$169.10 |
| 293-341-30 | 1-2"/25.4-50.8mm | . 00005 "/0.001mm | Ratchet Stop w/Standard | \$243.00 | \$230.85 |
| 293-345-30 | 1-2"/25.4-50.8mm | . 00005 "/0.001mm | Ratchet Thimble w/Standard | \$243.00 | \$230.85 |
| MDC Lite Micrometers |  |  |  |  |  |
| 293-831-30 | 0-1"/0-25.4mm | . $00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | Ratchet Stop | \$135.00 | \$128.25 |
| 293-832-30 | 0-1"/0-25.4mm | . $00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | Friction Thimble | \$139.00 | \$132.05 |


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA662 | 40 I IP5 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| $05 C Z A 663$ | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |

## QuantuMike

Coolant Proof Micrometer



## Features

- Faster measurement with 2 mm travel per revolution instead of the standard 0.5 mm
- A patented ratchet thimble mechanism helps ensure repeatability
- A Function lock helps prevent error
- IP-65 protection level
- Certificate of inspection is provided


## Significant reduction in positioning time



| Order No. | Range | Resolution | List Price | Sale Price |
| :--- | :--- | :--- | :---: | :---: |
| 293-180* | $0-11^{\prime \prime} / 0-25 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\$ 262.00$ | $\$ 248.90$ |
| 293-181* | $1-2^{\prime \prime} / 25-50 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\$ 300.00$ | $\$ 285.00$ |
| 293-185 | $0-1^{\prime \prime} / 0-25 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\$ 226.00$ | $\$ 214.70$ |
| 293-186 | $1-2^{\prime \prime} / 25-50 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\$ 258.00$ | $\$ 245.10$ |

*with SPC Output

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA662 | 40" IP65 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| 05CZA663 | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |

## MDH Micrometer

High-Accuracy Sub-Micron Digimatic Micrometer


## Features

- Enabling $.000005^{\prime \prime} / 0.1 \mu \mathrm{~m}$ resolution measurement, this micrometer is ideal for customers who need to make highly accurate measurements with a hand-held tool.
- The ABS (absolute) rotary sensor also eliminates the need to perform origin setting each time the power is turned on, letting you start measuring straight away. With no possibility of overspeed errors, the High-Accuracy Digimatic Micrometer also delivers a higher level of reliability.

| Order No. | Range | Resolution | Accuracy | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $293-100$ | $0-25 \mathrm{~mm}$ | $0.0001 \mathrm{~mm} / 0.0005 \mathrm{~mm}$ <br> (switchable) | $\pm 0.5 \mu \mathrm{~m}$ | $\$ 1,630.00$ | $\$ 1,467.00$ |
| $293-130$ | $0-1 "$ <br> $0-$ <br> 25.4 mm | $.000005^{\prime \prime} / .00002^{\prime \prime}$ <br> $0.0001 \mathrm{~mm} / 0.0005 \mathrm{~mm}$ <br> (switchable) | $\pm .00002^{\prime \prime}$ | $\$ 1,630.00$ | $\$ 1,467.00$ |



Function lock

## Micrometer Stand

The micrometer stand is designed to provide the convenience of a benchtop tool with hand micrometers or other gages.

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| $\mathbf{1 5 6 - 1 0 1 - 1 0}$ | Micrometer Stand | $\$ 110.00$ | $\$ 99.00$ |



## Digimatic Uni-Mike



317-351

## (1P65

Uni-Mike


## Features

- Measures tube thickness, shoulder-edge distance, rivet head height, etc. with interchangeable anvils (flat anvil, rod anvil, V-anvil).
- Supplied with flat anvil and rod anvil.

| Order No. | Range | LCD Resolution | Accuracy | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| $317-351$ | $0-1$ " $/ 0-25 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\pm .0002^{\prime \prime}$ | Interchangeable Anvils | $\$ 529.00$ | $\$ 476.10$ |
|  | $317-352$ | $1-2 " / 25-50 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\pm .0002^{\prime \prime}$ | IP-65 with SPC output | $\$ 538.00$ |


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA662 | $40^{\prime \prime}$ IP65 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| 05CZA663 | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |

## Features

- Measures tube thickness, shoulder-edge distance, rivet head height, etc. with interchangeable anvils (flat anvil, rod anvil, V-anvil).
- Supplied with flat anvil and rod anvil.

| Order No. | Range | Graduations | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :---: | :---: |
| $117-107$ | $0-1^{\prime \prime}$ | $.0001^{\prime \prime}$ |  | $\$ 208.00$ | $\$ 187.20$ |
| $117-108$ | $1-2^{\prime \prime}$ | $.0001^{\prime \prime}$ | w/1" standard | $\$ 244.00$ | $\$ 219.60$ |

## Digit Outside Micrometers

Features

- Mechanical digit counter with .001 " reading for quick and error-free reading.



## Tool Kits



The very basic measuring instruments recommended for vocational students and machinist apprentices are supplied in this tool kit.


64PKA069

| Order No. | Includes these Items |  | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: |
| 64PKA069 | 103-135 | Outside Micrometer (Friction Thimble Type) (Range: 0-1", Graduation: .0001") | \$410.00 | \$389.50 |
|  | 182-202 | $6{ }^{\prime \prime}$ Full-Flexible Rule (16R) |  |  |
|  | 513-518T | Test Indicator Set (Range: .04", Graduation: .001") |  |  |
|  | 505-675 | 675 Dial Caliper (Range: 0-6", Dial Graduation: .001") |  |  |
|  | 050501 | Mahogany Case |  |  |

## Outside Micrometers — Inch Models

## Features



## Outside Micrometers



## Features

- Improved repeatability for both "expert" and novice users
- Constant force device allows easy one-handed operation
- Full wrap heat insulation cover (102 Series)
- Certificate of Inspection provided
- Speeder for quick thimble rotation
- Carbide measuring faces

| Order No. | Range | Graduations | Accuracy | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- |
| With Ratchet Stop |  |  |  |  |  |
| 101-113 | $0-1^{\prime \prime}$ | $.0001^{\prime \prime}$ | $\pm .0001^{\prime \prime}$ | $\$ 162.00$ | $\$ 145.80$ |
| $101-114^{*}$ | $1-2^{\prime \prime}$ | $.0001^{\prime \prime}$ | $\pm .0001^{\prime \prime}$ | $\$ 162.00$ | $\$ 145.80$ |
| $101-119^{*}$ | $2-3^{\prime \prime}$ | $.0001^{\prime \prime}$ | $\pm .0001^{\prime \prime}$ | $\$ 177.00$ | $\$ 159.30$ |
| 101-120* | $3-4^{\prime \prime}$ | $.0001^{\prime \prime}$ | $\pm .00015^{\prime \prime}$ | $\$ 195.00$ | $\$ 175.50$ |
| With Friction Thimble |  |  |  |  |  |
| $101-117$ | $0-1^{\prime \prime}$ | $.0001^{\prime \prime}$ | $\pm .0001^{\prime \prime}$ | $\$ 133.00$ | $\$ 119.70$ |
| $101-118^{*}$ | $1-2^{\prime \prime}$ | $.0001^{\prime \prime}$ | $\pm .0001^{\prime \prime}$ | $\$ 162.00$ | $\$ 145.80$ |

* Standard Included


## Micrometers

## Disk Micrometers

## Features

(IP) 65


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA662 | $40^{\prime \prime}$ IP65 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| 05CZA663 | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |

## Spline Micrometers



## Features

- IP65 water/dust protection (Series 331).
- The anvil and spindle have a small diameter for measuring splined shafts, slots, and keyways.
- With Ratchet Stop for constant force.
- With SPC output (Series 331).
- With a standard bar except $0-1$ " and $0-25 \mathrm{~mm}$ model.
- Supplied in fitted plastic case.
(1P65



## Micrometers

## Point Micrometers

## Features

- IP65 water/dust protection

- .Pointed spindle and anvil for measuring the web thickness of drills, small grooves, keyways, and other hard-to-reach dimensions.
- 15 degree and 30 degree measuring points are available.
- The measuring points have approximately $0.3 \mathrm{~mm} / .012^{\prime \prime}$ radius.
- With a standard bar except 0-1" and 0-25mm model.
- With SPC output
- Supplied in fitted plastic case.


| Order No. | Range | Resolution | Accuracy | Point | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 342-351 | $\begin{array}{\|l\|} 0-1 " I \\ 0-25.4 \mathrm{~mm} \end{array}$ | $\begin{aligned} & 00005 " / \\ & 0.001 \mathrm{~mm} \end{aligned}$ | $\pm .0001{ }^{\prime \prime}$ | $15^{\circ}$ | \$462.00 | \$438.90 |
| 342-361 |  |  | $\pm .0001$ " | $30^{\circ}$ | \$451.00 | \$428.45 |
| 342-352 | $\begin{aligned} & 1-2^{\prime \prime \prime} \\ & 25.4-50.8 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & 00005 " / \\ & 0.001 \mathrm{~mm} \end{aligned}$ | $\pm .0001{ }^{\prime \prime}$ | $15^{\circ}$ | \$515.00 | \$489.25 |
| 342-362 |  |  | $\pm .0001{ }^{\prime \prime}$ | $30^{\circ}$ | \$504.00 | \$478.80 |
| 342-353 | $\begin{aligned} & 2-3^{\prime \prime} / \\ & 50.8-76.2 \mathrm{~mm} \end{aligned}$ | $\begin{aligned} & .00005^{\prime \prime} / \\ & 0.001 \mathrm{~mm} \end{aligned}$ | $\pm .0001{ }^{\prime \prime}$ | $15^{\circ}$ | \$537.00 | \$510.15 |
| 342-363 |  |  | $\pm .0001$ " | $30^{\circ}$ | \$527.00 | \$500.65 |
| 342-354 | $\begin{array}{\|l\|} \hline 3-4^{\prime \prime} / \\ 76.2-101.6 \mathrm{~mm} \end{array}$ | $\begin{aligned} & .00005^{\prime \prime} / \\ & 0.001 \mathrm{~mm} \end{aligned}$ | $\pm .00015^{\prime \prime}$ | $15^{\circ}$ | \$561.00 | \$532.95 |
| 342-364 |  |  | $\pm .00015{ }^{\prime \prime}$ | $30^{\circ}$ | \$571.00 | \$542.45 |


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| O5CZA662 | $40^{\prime \prime}$ IP65 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| 05CZA663 | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |

## Blade Micrometers



## Features

- .028 "/ 0.7 mm ( 1 mm : models over 100 mm ) edge thickness to enter narrow recesses.
- With Ratchet Stop for constant force.

422-330
(1)65

- With SPC output
- Supplied in fitted plastic case.


| Order No. | Range | Resolution | Accuracy | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| $422-330$ | $0-1^{\prime \prime} / 0-25.4 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\pm .00015^{\prime \prime}$ | Type A | $\$ 780.00$ | $\$ 702.00$ |
| $422-331$ | $1-2^{\prime \prime} / 25.4-50.8 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\pm .00015^{\prime \prime}$ | Type A | $\$ 835.00$ | $\$ 751.50$ |
| $422-332$ | $2-3^{\prime \prime} / 50-76.2 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\pm .00015^{\prime \prime}$ | Type A | $\$ 883.00$ | $\$ 794.70$ |
| $422-333$ | $3-4^{\prime \prime} / 76.2-101.6 \mathrm{~mm}$ | $.00005^{\prime \prime} / 0.001 \mathrm{~mm}$ | $\pm .0002^{\prime \prime}$ | Type A | $\$ 920.00$ | $\$ 828.00$ |

Type A

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA662 | $40^{\prime \prime}$ IP65 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| 05CZA663 | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |



148 Series Small Size Standard Style Micrometer Heads

Standard small size make these mic heads convenient for many gage fixtures.


148 Series Ultra-Small/Small Size Style Micrometer Heads

Extra small size make these mic heads fit where larger mic heads won't.

150-802

150 Series Mid Size Standard Style Micrometer Heads

The longer range make these mic heads great for wide range adjustment applications.

| Order No. | Graduation | Range | Stem Dia. | Stem | Spindle Face | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Common Size Small Type Micrometer Heads |  |  |  |  |  |  |  |  |
| 148-811 | . 001 " | 0-.5" | . $375^{\prime \prime}$ | Plain | Spherical (SR4) |  | \$66.05 | \$59.45 |
| 148-502 | . 001 " | 0-.5" | . $375^{\prime \prime}$ | w/clamp nut \& Spindle Lock | Flat |  | \$68.40 | \$61.55 |
| 148-801 | 0.01 mm | $0-13 \mathrm{~mm}$ | 9.5 mm | Plain | Spherical (SR4) |  | \$66.05 | \$59.45 |
| 148-121 | 0.01 mm | $0-13 \mathrm{~mm}$ | 9.5 mm | Plain with Spindle Lock | Flat | - | \$70.25 | \$63.25 |
| Ultra-Small/Small Size Micrometer Heads |  |  |  |  |  |  |  |  |
| 148-202 | . 001 " | 0-250" | .250" | Plain | Flat | - | \$62.85 | \$56.60 |
| 148-206 | . 001 " | 0-.250" | . 250 " | Plain | Spherical (SR3) | - | \$64.70 | \$58.25 |
| 148-208 | . 001 " | 0-.250" | .250" | with Clamp Nut | Spherical (SR3) | - | \$66.05 | \$59.45 |
| 148-201 | 0.01 mm | $0-6.5 \mathrm{~mm}$ | 6 mm | Plain | Flat | - | \$62.85 | \$56.60 |
| 148-205 | 0.01 mm | $0-6.5 \mathrm{~mm}$ | 6 mm | Plain | Spherical (SR3) | - | \$64.70 | \$58.25 |
| 148-207 | 0.01 mm | $0-6.5 \mathrm{~mm}$ | 6 mm | with Clamp Nut | Spherical (SR3) | - | \$66.05 | \$59.45 |
| 150 Series Mid Size Standard Style Micrometer Heads |  |  |  |  |  |  |  |  |
| 150-208 | . 001 " | 0-1" | . $375^{\prime \prime}$ | Plain | Flat (Carbide Tip) | - | \$75.20 | \$67.70 |
| 150-812 | . 001 " | 0-1" | . $375^{\prime \prime}$ | with Clamp Nut | Spherical (SR4) | - | \$80.70 | \$72.65 |
| 150-802 | 0.01 mm | $0-25 \mathrm{~mm}$ | 10 mm | with Clamp Nut | Spherical (SR4) | - | \$80.70 | \$72.65 |

## Variety of Specifications



# ABSOLUTE Coolant Proof Calipers 

| Order No. | Range | List Price | Sale Price |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
| Non-Output Style |  |  |  |
| $500-752-10$ | $0-6^{\prime \prime} / 0-150 \mathrm{~mm}$ | $\$ 209.00$ | $\$ 198.55$ |
| $500-753-10$ | $0-8^{\prime \prime} / 0-200 \mathrm{~mm}$ | $\$ 280.00$ | $\$ 266.00$ |
| $500-754-10$ | $0-12^{\prime \prime} / 0-300 \mathrm{~mm}$ | $\$ 484.00$ | $\$ 459.80$ |
|  |  |  |  |
| SPC Output Style |  |  |  |
| $500-762-10$ | $0-6^{\prime \prime} / 0-150 \mathrm{~mm}$ | $\$ 248.00$ | $\$ 235.60$ |
| $500-763-10$ | $0-8^{\prime \prime} / 0-200 \mathrm{~mm}$ | $\$ 312.00$ | $\$ 296.40$ |



## Features

- It's sealed housing is IP-67 rated, meaning it's immune to the coolants, dirt, grit and chips found in many manufacturing environments.
- $.0005 " / 0.01 \mathrm{~mm}$ resolution with $\pm .001$ " accuracy for 6 " models and 8 " models.
- Certificate of inspection provided ( $4^{\prime \prime} / 6^{\prime \prime} / 8^{\prime \prime}$ models).

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA624 | 40 " IP Caliper Cable | $\$ 93.90$ | $\$ 89.20$ |
| 05CZA625 | $80^{\prime \prime}$ IP Caliper Cable | $\$ 95.35$ | $\$ 90.60$ |



# ABSOLUTE Digimatic Calipers 

## ABSOLUTE"



| Order No. | Range | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: |
| No SPC Output Style |  |  |  |  |
| 500-195-30 | $0-4 / 10-100 \mathrm{~mm}$ | .075" Round depth bar | \$144.00 | \$136.80 |
| 500-196-30 | $0-6 " / 0-150 \mathrm{~mm}$ |  | \$156.00 | \$148.20 |
| 500-197-30 | 0-8"/0-200mm |  | \$224.00 | \$212.80 |
| 500-193 | $0-12$ "/0-300mm |  | \$450.00 | \$427.50 |
| With SPC Output Style |  |  |  |  |
| 500-170-30 | $0-4 " / 0-100 \mathrm{~mm}$ | .075" Round depth bar | \$172.00 | \$163.40 |
| 500-171-30 | 0-6"/0-150mm |  | \$183.00 | \$173.85 |
| 500-172-30 | 0-8"/0-200mm |  | \$241.00 | \$228.95 |
| 500-173 | $0-12 " / 0-300 \mathrm{~mm}$ |  | \$525.00 | \$498.75 |
| 500-505-10 | $0-18{ }^{\prime \prime} / 0-450 \mathrm{~mm}$ | Without Thumb Roller | \$819.00 | \$778.05 |
| 500-506-10 | $0-24 " / 0-600 \mathrm{~mm}$ | Without Thumb Roller | \$900.00 | \$855.00 |
| 500-507-10 | $0-40$ " $0-1000 \mathrm{~mm}$ | Without Thumb Roller | \$1740.00 | \$1,653.00 |

## AOS Absolute Digimatic Calipers

A new series of digimatic calipers derived from 30 years of accumulated Mitutoyo technologies. Equipped with the electromagnetic induction type absolute encoder and AOS (Advanced Onsite Sensor) applied for ABS coolant-proof calipers.

## Features

- Electromagnetic inductive sensor improves environmental resistance against dirt, water and oil
- A battery life of approximately 3.5 years has been achieved under normal use through the adoption of Mitutoyo's ABSOLUTE scale.
- The slider configuration features an ergonomic, thumb-friendly shape.
- Step-measurement capable.
- Carbide-tipped jaw models are ideally suited to the measurement of rough-machined workpieces, castings, grindstones, etc.
- The data output function allows integration into statistical process control and measurement systems.

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | ---: | ---: |
| 959149 | $40^{\prime \prime}$ Caliper Cable | $\$ 49.25$ | $\$ 46.80$ |
| 959150 | $80^{\prime \prime}$ Caliper Cable | $\$ 55.20$ | $\$ 52.45$ |



- Display character height: 9 mm


## ABSOLUTE Solar Calipers

## Features

- Absolute Encoder Technology

| Order No. | Range | Description | List Price | Sale Price |
| :--- | :--- | :--- | :---: | :---: |
| $\mathbf{5 0 0 - 4 7 4}$ | $0-6^{\prime \prime} / 0-150 \mathrm{~mm}$ | w/o output | $\$ 195.00$ | $\$ 185.25$ |
| $\mathbf{5 0 0 - 4 7 5}$ | $0-8 " / 0-200 \mathrm{~mm}$ | w/o output | $\$ 254.00$ | $\$ 241.30$ |

- No battery needed
- Works in low lighting conditions above 60 lux
- $0.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ resolution
- Supplied in fitted plastic case
High quality guide surface finish for smooth slider
movement
Conventional
Ra: 0.126 m
Ra: 0.071 um
Direction of the length


## ABSOLUTE



| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| $\mathbf{9 5 9 1 4 9}$ | $40^{\prime \prime}$ Caliper Cable | $\$ 49.25$ | $\$ 46.80$ |
| $\mathbf{9 5 9 1 5 0}$ | $80^{\prime \prime}$ Caliper Cable | $\$ 55.20$ | $\$ 52.45$ |

## Digimatic Carbon Fiber Calipers

## Features

- Lightweight Digimatic Calipers that employ CFRP (Carbon Fiber Reinforced Plastics) in the beam and jaws.
- Highly durable and easy to handle.
- Direct readout of ID measurements from the LCD. (Offset value can be set easily by pressing the Offset key.)
- Preset function for setting a desired starting point.
- With SPC data output.
- Special models available with ceramic jaws which are suitable for measuring abrasive and magnetic products.
- Supplied in fitted wooden case.

- . $0005^{\prime \prime} / 0.01 \mathrm{~mm}$ Resolution

| Order No. | Range | List Price | Sale Price |
| :--- | :--- | :--- | :--- |
| $552-314-10$ | $40^{\prime \prime} / 1000 \mathrm{~mm}$ | $\$ 1,890.00$ | $\$ 1,701.00$ |
| $552-315-10$ | $60^{\prime \prime} / 1500 \mathrm{~mm}$ | $\$ 2,260.00$ | $\$ 2,034.00$ |
| $552-316-10$ | $80^{\prime \prime} / 2000 \mathrm{~mm}$ | $\$ 3,540.00$ | $\$ 3,186.00$ |


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA624 | $40^{\prime \prime}$ IP Caliper Cable | $\$ 93.90$ | $\$ 89.20$ |
| 05CZA625 | $80^{\prime \prime}$ IP Caliper Cable | $\$ 95.35$ | $\$ 90.60$ |

## MyCAL Lite Digital Calipers



## Features

- Economically priced
- Large LCD digits
- 001 " $/ 0.1 \mathrm{~mm}$ resolution
- Accuracy: $\pm .005 " / \pm .0 .2 \mathrm{~mm}$

| Order No. | Range | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| $700-113-10$ | $0-6^{\prime \prime} / 0-150 \mathrm{~mm}$ | $\$ 116.00$ | $\$ 92.80$ |
| $700-123-10$ | $0-8^{\prime \prime} / 0-200 \mathrm{~mm}$ | $\$ 178.00$ | $\$ 142.40$ |

## Mitutoyo Caliper Production

Mitutoyo's high quality calipers are designed and built in our Utsunomiya, Japan factory. These tools begin as specially developed stainless steel sheets, which are then laser cut to the general shape seen in the finished part. The frames and sliders, once laser cut, are machined to final size permitting assembly in our highly automated production facility. Once completed, each caliper is thoroughly inspected and tested to ensure the high precision and quality a Mitutoyo customer deserves. Each caliper is packaged with it's own unique certificate of inspection as further proof of its quality.

## Dial Calipers



- Stainless Stee
- Mitutoyo has improved the durability of it's calipers by using a TiN coating on the sliding surfaces of the 6 " and 8 " main beam.
-. 001 " graduations
- New designed dial movement for ultra smooth sliding and high shock protection.
- Titanium Nitride (TiN) coating is applied to the sliding surface to increase wear resistance (except for 0-12" and $0-300 \mathrm{~mm}$ model).
- Lock screw for dial bezel and for holding the sliding jaw position.
- Can measure OD, ID, depth, and steps.
- Models available with carbide-tipped OD and ID jaws.
- Supplied in fitted plastic case.

| Order No. | Range | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :---: | :---: |
| $505-674$ | $4^{\prime \prime} .100^{\prime \prime} /$ rev. |  | $\$ 103.00$ | $\$ 92.70$ |
| $505-675$ | $6^{\prime \prime} .100^{\prime \prime} /$ rev. |  | $\$ 121.00$ | $\$ 108.90$ |
| $505-675-51$ | $6^{\prime \prime} .100^{\prime \prime} /$ rev. | Blue Face | $\$ 121.00$ | $\$ 108.90$ |
| $505-675-55$ | $6^{\prime \prime} .100^{\prime \prime} /$ rev. | Orange Face | $\$ 121.00$ | $\$ 108.90$ |
| $505-675-66$ | $6^{\prime \prime} .100^{\prime \prime} /$ rev. | Black Face w/ Ratchet Stop | $\$ 130.00$ | $\$ 117.00$ |
| $505-689$ | $6^{\prime \prime} .100^{\prime \prime} /$ rev. | Extra Smooth Movement | $\$ 153.00$ | $\$ 137.70$ |
| $505-712$ | $6^{\prime \prime} .100^{\prime \prime} /$ rev. | Carbide Tipped Jaws | $\$ 207.00$ | $\$ 186.30$ |
| $505-717$ | $6^{\prime \prime} .200^{\prime \prime} /$ rev. |  | $\$ 111.00$ | $\$ 99.90$ |
| $505-676$ | $8^{\prime \prime} .100^{\prime \prime} /$ rev |  | $\$ 177.00$ | $\$ 159.30$ |
| $505-690$ | $8^{\prime \prime} .100^{\prime \prime} /$ rev | Extra Smooth Movement | $\$ 202.00$ | $\$ 181.80$ |
| $505-677$ | $12^{\prime \prime} .100 /$ rev |  | $\$ 281.00$ | $\$ 252.90$ |
| $505-720$ | $12^{\prime \prime} .200 /$ rev |  | $\$ 261.00$ | $\$ 234.90$ |

## Vernier Caliper

## Features

- Can measure OD, ID, depth and steps
- The small vernier face angle $\left(14^{\circ}\right)$ provides easy reading.
- Dual reading scales on vernier.
- Lock screw for holding the sliding jaw position.
- Carbide-tipped jaw type calipers are also available.
- Supplied with vinyl holster in fitted carton. Except 24" / 600mm models are carton only. 40" / 1000mm supplied in wooden case.


| Order No. | Range | Vernier Graduation |  | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :---: | :---: |
|  |  | Lower Scale | Upper Scale |  |  |  |
| $\mathbf{5 3 0 - 1 0 4}$ | $0-150 \mathrm{~mm} / 0-6^{\prime \prime}$ | 0.05 mm | $1 / 128^{\prime \prime}$ |  | $\$ 75.90$ | $\$ 68.30$ |
| $\mathbf{5 3 0 - 3 1 2 *}$ | $0-150 \mathrm{~mm} / 0-6^{\prime \prime}$ | 0.02 mm | $.001^{\prime \prime}$ | High accuracy model | $\$ 105.00$ | $\$ 94.50$ |
| $\mathbf{5 3 0 - 1 1 4}$ | $0-200 \mathrm{~mm} / 0-8^{\prime \prime}$ | 0.05 mm | $1 / 128^{\prime \prime}$ |  | $\$ 124.00$ | $\$ 111.60$ |
| $\mathbf{5 3 0 - 1 1 8 ^ { * }}$ | $0-200 \mathrm{~mm} / 0-8^{\prime \prime}$ | 0.02 mm | $.001^{\prime \prime}$ | High accuracy model | $\$ 124.00$ | $\$ 111.60$ |
| $\mathbf{5 3 0 - 1 1 5}$ | $0-300 \mathrm{~mm} / 0-12^{\prime \prime}$ | 0.05 mm | $1 / 128^{\prime \prime}$ |  | $\$ 237.00$ | $\$ 213.30$ |
| $\mathbf{5 3 0 - 1 1 9 *}$ | $0-300 \mathrm{~mm} / 0-12^{\prime \prime}$ | 0.02 mm | $.001^{\prime \prime}$ | High accuracy model | $\$ 232.00$ | $\$ 208.80$ |

* Graduation 0.02 mm



## Inside Micrometers



| Order No. | Range | Graduations | Style | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :---: | :---: |
| $\mathbf{1 4 1 - 2 0 8}$ | $2-8^{\prime \prime}$ | $.001^{\prime \prime}$ | Inside Micrometer | $\$ 195.00$ | $\$ 175.50$ |
| $145-193$ | $.2-1.2^{\prime \prime}$ | $.001^{\prime \prime}$ | Caliper Type Inside Micrometer | $\$ 244.00$ | $\$ 219.60$ |

Optional Accessories
05CZA662: SPC cable with data switch $1 \mathrm{~m} / 40^{\prime \prime}$
05CZA663: SPC cable with data switch $2 \mathrm{~m} / 80^{\prime \prime}$
----: $\quad$ Setting ring
300401: Cap for stand holder
300400: Stand holder


## Bore Gages

## Features

- Most popular Bore Gages.
- Carbide-tipped contact points for durability.
- The dial indicator is fully protected by a rugged cover.
- Optional extension rods can be attached for measuring deep holes.

| Order No | Range | Graduation (Indicator) | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: |
| 511-751 | . 7 -1.4" | .0001" (2923SB-10) | \$411.00 | \$369.90 |
| 511-752 | $1.4-2.5{ }^{\prime \prime}$ |  | \$401.00 | \$360.90 |
| 511-753 | 2.0-6.0" |  | \$438.00 | \$394.20 |
| 511-754 | 4.0-6.5" |  | \$579.00 | \$521.10 |
| 511-755 | 6.5-10" |  | \$652.00 | \$586.80 |
| 511-756 | 10-16" |  | \$776.00 | \$698.40 |



Optional Accessories
953549: $125 \mathrm{~mm} / 4.92^{\prime \prime}$ Extension rod for $18-35 \mathrm{~mm} / .7-1.4^{\prime \prime}$ models
953552: $125 \mathrm{~mm} / 4.92^{\prime \prime}$ Extension rod for $35-160 \mathrm{~mm} / 1.4-6.5^{\prime \prime}$ models 953557: $125 \mathrm{~mm} / 4.92^{\prime \prime}$ Extension rod for $160-400 \mathrm{~mm} / 6.5-16^{\prime \prime}$ models 953550: $250 \mathrm{~mm} / 9.84^{\prime \prime}$ Extension rod for $18-35 \mathrm{~mm} / .7-1.4$ " models 953553: $250 \mathrm{~mm} / 9.84^{\prime \prime}$ Extension rod for $35-160 \mathrm{~mm} / 1.4-6.5^{\prime \prime}$ models $250 \mathrm{~mm} / 9.84^{\prime \prime}$ Extension rod for $160-400 \mathrm{~mm} / 6.5-16^{\prime \prime}$ models $500 \mathrm{~mm} / 19.69^{\prime \prime}$ Extension rod for $18-35 \mathrm{~mm} / .7-1.4^{4}$ models 953554: $\quad 500 \mathrm{~mm} / 19.69^{\prime \prime}$ Extension rod for $35-160 \mathrm{~mm} / 1.4-6.5^{\prime \prime}$ models 500mm / 19.69" Extension rod for $160-400 \mathrm{~mm} / 6.5-16$ " models $750 \mathrm{~mm} / 29.53$ " Extension rod for $35-160 \mathrm{~mm} / 1.4-6.5^{\prime \prime}$ models $750 \mathrm{~mm} / 29.53^{\prime \prime}$ Extension rod for 160-400mm / 6.5-16" models $1000 \mathrm{~mm} / 39.37^{\prime \prime}$ Extension rod for $35-160 \mathrm{~mm} / 1.4-6.5^{\prime \prime}$ models $1000 \mathrm{~mm} / 39.37^{\prime \prime}$ Extension rod for $160-400 \mathrm{~mm} / 6.5-16$ " models

## Holtest Sets

## Complete Unit Sets

- Each set includes complete gages (micrometer head units and measuring heads for each size).


## Features

- TiN-coated measuring contact points (over $6 \mathrm{~mm} / .275^{\prime \prime}$ range models) provide excellent durability and impact resistance and allow the instrument to measure to the bottom of a blind hole (up to 100 mm / 4"models).
- Highly durable because of carbide-tipped contact points (anvils up to $12 \mathrm{~mm} / .5^{\prime \prime}$ models).
- Can measure deep holes using an Extension rod (optional) which is available on models over 6 mm (.275") measuring range.
- With Ratchet Stop for constant force.
- Setting Rings for zero point adjustment are optional.

- Supplied in fitted plastic case up to $100 \mathrm{~mm} / 4^{\prime \prime}$. Over $100 \mathrm{~mm} / 4^{\prime \prime}$ supplied in wooden case.


| Order No. | Range | Individual Range | Setting Rings Included | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 368-917 | .5" $-.8{ }^{\prime \prime}$ | .5-65" ${ }^{\prime \prime} .65-.8^{\prime \prime}$ | 65" DIA. | With Extension Rod | \$1,490.00 | \$1,341.00 |
| 368-918 | .8" - 2" | $\begin{aligned} & .8-1 ", 1-1.2^{",}, 1.2- \\ & 1.6^{"}, 1.6-2 " \end{aligned}$ | $\begin{aligned} & \text { 1" DIA., 1.6" } \\ & \text { DIA. } \end{aligned}$ |  | \$3,410.00 | \$3,069.00 |
| 368-919 | 2" - 4" | $\begin{aligned} & 2-2.5^{\prime \prime}, 2.5-3^{\prime \prime} \\ & 3-3.5^{\prime \prime}, 3.5-4^{\prime \prime} \end{aligned}$ | $\begin{aligned} & \text { 2.5" DIA., } 3.5^{\prime \prime} \\ & \text { DIA. } \end{aligned}$ |  | \$4,860.00 | \$4,374.00 |
| 368-920 | 4" - 8" | $\begin{aligned} & 4-5^{\prime \prime}, 5-6^{\prime \prime}, 6-7^{\prime \prime} \\ & 7-8^{\prime \prime} \end{aligned}$ | $\begin{aligned} & 5^{\prime \prime} \text { DIA., } 7^{\prime \prime} \\ & \text { DIA. } \end{aligned}$ |  | \$7,440.00 | \$6,696.00 |

## Borematic Sets

## Complete Unit Sets

- Each set includes complete gages (micrometer head units and measuring heads for each size).


## Features

- TiN-coated measuring contact points provide excellent durability
- The ABSOLUTE linear encoder eliminates over-speed errors. and impact resistance and allow the instrument to measure to the bottom of a blind hole.
- Large LCD digits of 8.5 mm height for error-free reading.
- 330-degree rotatable display unit for easy reading at any angle.
- With SPC data output.
- Setting rings for origin point setting are optional.
- Can measure deep holes by attaching an optional extension rod.
- GO/NO-GO judgment function.
- Measurement can be taken closer to the bottom of a blind bore.

| Order No. | Range | Display Unit | Setting Rings Included | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 568-928 | . $275^{\prime \prime}-.5^{\prime \prime} / 6.985-12.7 \mathrm{~mm}$ | 568-015 | $\begin{aligned} & \text { 177-179 (.35" DIA.) } \\ & \text { 177-283 (.425" DIA.) } \end{aligned}$ | \$2,230.00 | \$2,007.00 |
| 568-929 | . $5^{\prime \prime}-1^{\prime \prime} / 12.7-25.4 \mathrm{~mm}$ |  | $\begin{aligned} & \text { 177-182 (.65" DIA.) } \\ & \text { 177-287 (.8" DIA.) } \end{aligned}$ | \$2,530.00 | \$2,277.00 |
| 568-930 | $1^{\prime \prime}-2^{\prime \prime} / 25.4-50.8 \mathrm{~mm}$ |  | $\begin{aligned} & \text { 177-289 (1.2" DIA.) } \\ & \text { 177-291 (1.6" DIA.) } \end{aligned}$ | \$3,080.00 | \$2,772.00 |
| 568-936 | $2^{\prime \prime}-4^{\prime \prime} / 50.8-101.6 \mathrm{~mm}$ |  | $\begin{aligned} & \text { 177-315 (2.5" DIA.) } \\ & \text { 177-319 (3.5" DIA.) } \end{aligned}$ | \$4,440.00 | \$3,996.00 |


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 905338 | $40^{\prime \prime}$ SPC Cable | $\$ 40.05$ | $\$ 38.05$ |
| 905409 | 80 " SPC Cable | $\$ 47.75$ | $\$ 45.35$ |



## Digimatic Holtest

## Features

- TiN-coated measuring contact points provide excellent durability and impact resistance and allow the instrument to measure to the bottom of a blind hole ( up to 100 mm / 4"models).
- Large LCD readout.
- Functions available: Presetting, Zero/ABS, Auto power On/Off, Data hold, Data output, Error alarm, Battery replacement alarm.
- With Ratchet Stop for constant force.
- Can measure deep holes by attaching an Extension rod (optional).
- Setting rings for origin point setting are optional.
- Supplied in fitted plastic case up to $100 \mathrm{~mm} / 4^{\prime \prime}$. Over 100 mm / 4 " supplied in wooden case.


468-261


468-263


## Optional Accessories

04AZB157: Mounting plate for stand
156-101-10: Stand
952322: Extension rod $100 \mathrm{~mm} / 3.94^{\prime \prime}$ For range $6-12 \mathrm{~mm} / .275-.5^{\prime \prime}$ models
952621: Extension rod $150 \mathrm{~mm} /$ 5 $^{\prime \prime} 9^{\prime \prime}$ For range $12-20 \mathrm{~mm} / .5^{\prime \prime}-.8^{\prime \prime}$ models
952622: Extension rod $150 \mathrm{~mm} / 5.9^{\prime \prime}$ For range $20-50 \mathrm{~mm} / 8^{\prime \prime}-2^{\prime \prime}$ models
952623: Extension rod $150 \mathrm{~mm} / 5.9^{\prime \prime}$ For range $50-300 \mathrm{~mm} / 2^{\prime \prime}-12^{\prime \prime}$ models


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 05CZA662 | 40 " IP65 Mic Cable | $\$ 83.80$ | $\$ 79.60$ |
| 05CZA663 | $80^{\prime \prime}$ IP65 Mic Cable | $\$ 92.45$ | $\$ 87.85$ |

## Inside Measurement

## Digimatic Depth Gage

## Features

- ABSOLUTE Digimatic Depth Gage can keep track of the origin point once set for the entire life of the battery
- Base and measuring faces are hardened and micro-lapped.
- Optional wider extension base are available. (up to $18{ }^{\prime \prime} / 450 \mathrm{~mm}$ range models)
- With SPC data output.


| Order No. | Range | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| $\mathbf{5 7 1 - 2 1 2 - 2 0 ~}$ | $0-8^{\prime \prime} / 0-200 \mathrm{~mm}$ | $\$ 426.00$ | $\$ 404.70$ |
| $\mathbf{5 7 1 - 2 1 3 - 1 0}$ | $0-12^{\prime \prime} / 0-300 \mathrm{~mm}$ | $\$ 492.00$ | $\$ 467.40$ |



| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 959149 | $40^{\prime \prime}$ Depth Gage Cable | $\$ 49.25$ | $\$ 46.80$ |
| 959150 | $80^{\prime \prime}$ Depth Gage Cable | $\$ 55.20$ | $\$ 52.45$ |

## Depth Micrometers

## Features

- Interchangeable rods, with lapped measuring end, provide a wide measuring range.
- The rod length can be interchanged in $1^{\prime \prime}$ increments.
- With ratchet stop for constant force.
- With measuring rod clamp.
- Supplied in fitted plastic case.

| Order No. | Range | Graduations | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :---: |
| $129-127$ | $0-4^{\prime \prime}$ | $.001^{\prime \prime}$ | $2.5^{\prime \prime}$ Base | $\$ 187.00$ | $\$ 168.30$ |
| $129-131$ | $0-4^{\prime \prime}$ | $.001^{\prime \prime}$ | $4^{\prime \prime}$ Base | $\$ 207.00$ | $\$ 186.30$ |
| $129-128$ | $0-66^{\prime \prime}$ | $.001^{\prime \prime}$ | $2.5^{\prime \prime}$ Base | $\$ 226.00$ | $\$ 203.40$ |
| $129-149$ | $0-12^{\prime \prime}$ | $.001^{\prime \prime}$ | $2.5^{\prime \prime}$ Base | $\$ 398.00$ | $\$ 358.20$ |
| $129-150$ | $0-12^{\prime \prime}$ | $.001^{\prime \prime}$ | $4^{\prime \prime}$ Base | $\$ 416.00$ | $\$ 374.40$ |



129-127

## Tire Tread Depth Gage



Features

- Specially Designed to measure tire tread depth
- Plastic construction for lightweight use
- 001"/0.1mm resolution
- Accuracy: $\pm .008^{\prime \prime}$

| Order No. | Range | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| $700-105$ | $0-1$ " $/ 0-25.4 \mathrm{~mm}$ | $\$ 75.20$ | $\$ 71.45$ |

Mitutoyo Quality

## Quick Mini

Quick Mini is a convenient snap-action pocket thickness gage offering LCD digital readout. Quick Mini is ideal for rapid checking of a wide variety of materials including metal, paper, plastics and wood.


| Order No. | Range | Resolution | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- |
| $700-118-20$ | $0-.5^{\prime \prime} / 0-12.7 \mathrm{~mm}$ | $.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ | $\$ 118.00$ | $\$ 106.20$ |

## Indicators

## Series One Dial Indicators

Mitutoyo's Dial Indicators now offer users more stability and longer life, thanks to advances to the inner workings of the rack and pinion gear system. Shock resistance is increased with a more robust gear train, while contamination resistance has been dramatically increased over other indicators of this type with a tighter seal around the bezel and frame, and the elimination of a lifting lever screw.


| Order No. | Graduation | Range | Accuracy | Dial Face | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| 1410S | $.001^{\prime \prime}$ | $.25^{\prime \prime}$ | $\pm .001^{\prime \prime}$ | $0-100$ | $\$ 108.00$ | $\$ 97.20$ |
| 1410S-10** | $.001^{\prime \prime}$ | $.25^{\prime \prime}$ | $\pm .001^{\prime \prime}$ | $0-100$ | $\$ 112.00$ | $\$ 100.80$ |
| 1410SB* | $.001^{\prime \prime}$ | $.25^{\prime \prime}$ | $\pm .001^{\prime \prime}$ | $0-100$ | $\$ 108.00$ | $\$ 97.20$ |
| 1506S | $.0005^{\prime \prime}$ | $.125^{\prime \prime}$ | $\pm .0005^{\prime \prime}$ | $0-50$ | $\$ 99.80$ | $\$ 94.80$ |
| 1507S | $.0005^{\prime \prime}$ | $.125^{\prime \prime}$ | $\pm .0005^{\prime \prime}$ | $0-25-0$ | $\$ 99.80$ | $\$ 94.80$ |

* with flat back ** jeweled


## Series Two Dial Indicators

| Order No. | Graduation | Range/Rev | Type | Dial Reading | Accuracy First 2.5 <br> Rev/Overall | Force | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{2 3 5 8 S - 1 0}$ | $.0001^{\prime \prime}$ | $.5^{\prime \prime} / .01^{\prime \prime}$ | w/lug | $0-10$ | $.0001 / .0008$ | 2.0 N or less | $\$ 220.00$ | $\$ 209.00$ |
| $\mathbf{2 0 4 6 S}$ | 0.01 mm | $10 \mathrm{~mm} / 1 \mathrm{~mm}$ | w/lug | $0-100$ | 0.013 mm | 1.4 N or less | $\$ 114.00$ | $\$ 108.30$ |
| $\mathbf{2 4 1 6 S}$ | $.001^{\prime \prime}$ | $1^{\prime \prime} / .1^{\prime \prime}$ | w/lug | $0-100$ | $.001 / .002$ | 1.8 N or less | $\$ 119.00$ | $\$ 113.05$ |
| $\mathbf{2 4 1 6 S - 1 0}$ | $.001^{\prime \prime}$ | $1^{\prime \prime} / .1^{\prime \prime}$ | W/lug | $0-100$ | $.001 / .002$ | 1.8 N or less | $\$ 141.00$ | $\$ 133.95$ |
| $\mathbf{2 4 2 4 S - 1 9}$ | $.001^{\prime \prime}$ | $2^{\prime \prime} / 1^{\prime \prime}$ | W/lug | $0-100$ | $.001 / .003$ | 2.5 N or less | $\$ 220.00$ | $\$ 209.00$ |
| $\mathbf{2 7 7 6 S}$ | $.0005^{\prime \prime}$ | $1^{\prime \prime} / .05^{\prime \prime}$ | W/lug | $0-50$ | $.0005 / .002$ | 2.5 N or less | $\$ 142.00$ | $\$ 134.90$ |



## "Quick-Set" Test Indicators

The most direct gear train design ever applied to Test Indicators means- higher levels of sensitivity, reliability, repeatability and accuracy throughout tool life.

## Features

- Anti-magnetic
- Jeweled bearings
- No-clutch structure
- Water and dust resistant
- Glare-free crystal with scratch-resistant coating
- Metric dial faces in yellow
- Measuring force 0.3 N or less

| Order No. | Graduation | Range | Dial Face | Remarks | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{5 1 3 - 4 0 2}$ | $.0005^{\prime \prime}$ | $.030^{\prime \prime}$ | $0-15-0$ | Anti Magnet, <br> Jeweled | $\$ 130.00$ | $\$ 123.50$ |
| $\mathbf{5 1 3 - 4 0 2 T}$ | $.0005^{\prime \prime}$ | $.030^{\prime \prime}$ | $0-15-0$ | Set | $\$ 154.00$ | $\$ 146.30$ |
| $\mathbf{5 1 3 - 4 1 2}$ | $.0005^{\prime \prime}$ | $.030^{\prime \prime}$ | $0-15-0$ | Long Point | $\$ 186.00$ | $\$ 176.70$ |
| $\mathbf{5 1 3 - 4 1 2 T}$ | $.0005^{\prime \prime}$ | $.030^{\prime \prime}$ | $0-15-0$ | Long Point Set | $\$ 215.00$ | $\$ 204.25$ |
| $\mathbf{5 1 3 - 4 0 3}$ | $.0001^{\prime \prime}$ | $.008^{\prime \prime}$ | $0-4-0$ | Basic | $\$ 169.00$ | $\$ 160.55$ |
| $\mathbf{5 1 3 - 4 0 3 T}$ | $.0001^{\prime \prime}$ | $.008^{\prime \prime}$ | $0-4-0$ | Anti Magnet, <br> Full Set, Jeweled | $\$ 198.00$ | $\$ 188.10$ |



## Ruby Stylus Test Indicator

## Features

- Wear characteristic improved by $50 \%$.
- Non-magnetic and non-conductive material, enable its use in EDM operation

Contact Point diameter: .079"
Stem diameter: Ø3/8"


## Pocket Type Test Indicator

## Features

- Jeweled bearings
- Reversible measuring direction
- Contact points adjustable within $220^{\circ}$
- Two holding bars supplied

| Order No. | Graduation | Range | Dial Face | Accuracy | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{5 1 3 - 5 0 4 T}$ | $.0001^{\prime \prime}$ | $01^{\prime \prime}$ | $0-5-0$ | $\pm .0002^{\prime \prime}$ | $\$ 176.00$ | $\$ 167.20$ |
| $513-512 \mathbf{T}^{* *}$ | $0005^{\prime \prime}$ | $.02^{\prime \prime}$ | $0-10-0$ | $\pm .0005^{\prime \prime}$ | $\$ 182.00$ | $\$ 172.90$ |
| $\mathbf{5 1 3 - 5 1 8 T}$ | $.001^{\prime \prime}$ | $.04^{\prime \prime}$ | $0-20-0$ | $\pm .001^{\prime \prime}$ | $\$ 138.00$ | $\$ 131.10$ |



* Compact Style, ** Long Point


## Magnetic Stands

Mitutoyo Magnetic Stands accept all AGD-type dial indicators, test indicators and probes having $.375^{\prime \prime}, 6 \mathrm{~mm}$ or 8 mm diameter shanks and/or lug back with $1 / 4^{\prime \prime}$ diameter mounting hole. The On/Off switch offers instant mounting and dismounting without any adverse effect to the indicators or work surface.
Mitutoyo Magnetic Stands have 132 Lbf of magnetic force to help prevent damage to indicators and probes due to accidental base fall-over.

| Order No. | Decription | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 7010S | Magnetic Stand w/6" Rod \& Universal Clamp | $\$ 131.00$ | $\$ 124.45$ |
| 7011BN | Magnetic Stand w/6" Adjustable Rod \& Universal Clamp | $\$ 149.00$ | $\$ 141.55$ |
| 7012-10 | Flexible Magnetic Stand | $\$ 202.00$ | $\$ 191.90$ |
| 7033B | Universal Magnetic Stand | $\$ 194.00$ | $\$ 184.30$ |



## Dial Gage Stands

| Order No. | Max. Ht. <br> Capacity | Anvil Type | List Price | Sale Price |
| :--- | :---: | :---: | :---: | :---: |
| $7007-10$ | $3.54^{\prime \prime}$ | Serrated Anvil | $\$ 554.00$ | $\$ 526.30$ |
| $7001-10$ | $4.0^{\prime \prime}$ | Serrated Anvil | $\$ 554.00$ | $\$ 526.30$ |
| $7002-10$ | $4.0^{\prime \prime}$ | Flat Anvil | $\$ 554.00$ | $\$ 526.30$ |

The compact and versatile Dial Gage Stands are commonly used general-purpose stands for comparison measurements, 4" maximum height capacity. They feature a wide fine adjusting range for zero-setting gage heads.

7007-10

This Dial Gage Stand provides an ideal work base for all AGD type indicators as well as other gages


## Indicators

## IDC Digimatic Indicators

## Features

- Absolute Encoder ensures all settings and readings maintained for the life of the battery (even when the power is turned off)
- Preset, Zero-Set, inch/mm, +/- direction and GO/ $\pm$ NG functions
- Face rotates $330^{\circ}$ for use at various angles
- Stem diameter: . $375^{\prime \prime}$
- Immune to overspeed error
- SPC output provided
- Average battery life 7,000 hours using SR-44 battery (541980)

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| $\mathbf{9 0 5 3 3 8}$ | $40^{\prime \prime}$ Cable for Indicators | $\$ 40.05$ | $\$ 38.05$ |
| $\mathbf{9 0 5 4 0 9}$ | $80^{\prime \prime}$ Cable for Indicators | $\$ 47.75$ | $\$ 45.35$ |


| Order No. | Range | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: |
| .0005"/0.01mm Resolution |  |  |  |  |
| 543-402 | . 500 "/12.7mm | Lug Back | \$310.00 | \$294.50 |
| 543-402B | . 500 "/12.7mm | Flat Back | \$310.00 | \$294.50 |
| 543-476B | 1"/25mm | Flat Back | \$454.00 | \$431.30 |
| 543-496B | 2"/50mm | Flat Back | \$597.00 | \$567.15 |
| .00005 " $/ .0001$ " $/ .0005$ " $/ 0.001 \mathrm{~mm} / 0.01 \mathrm{~mm}$ Resolution |  |  |  |  |
| 543-392 | . 500 "/12.7mm | Lug Back | \$424.00 | \$402.80 |
| 543-392B | . 500 "/12.7mm | Flat Back | \$424.00 | \$402.80 |
| 543-472B | 1"/25mm | Flat Back | \$568.00 | \$539.60 |
| 543-492B | 2"/50mm | Flat Back | \$713.00 | \$677.35 |

- Three large buttons

The popular three-large button design, which is used in products such as the ABS coolant proof Digimatic indicators ID-N/B, makes buttons easier to press and operations easier to perform.


- Power switch - Data output (when connected to an external device) - Data hold (when no external device is connected)
Switches between the ABS - Parameter setting mode Count direction switching tolerance udgment g, resolution , scale factor setting, and function lock setting - inch/mm conversion (inch/mm models)
- $330^{\circ}$ rotary display

The display can be rotated $330^{\circ}$, allowing use at a position where you can easily read the measurement value.


IDS Digimatic Indicators with Absolute Encoder

| Order No. | Range | Resolution | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 543-793 | 0-.5"/0-12.7mm | . 0001 "/ 0.001 mm | n Lug Back | \$273.00 | \$259.35 |
| 543-793B | $0-.5$ " $0-12.7 \mathrm{~mm}$ | . 0001 " $/ 0.001 \mathrm{~mm}$ | m Flat Back | \$273.00 | \$259.35 |
| 543-792 | $0-.5$ " $0-12.7 \mathrm{~mm}$ | . 00005 "/0.001mm | m Lug Back | \$273.00 | \$259.35 |
| 543-792B | $0-.5$ " $/ 0-12.7 \mathrm{~mm}$ | . 00005 "/0.001mm | m Flat Back | \$273.00 | \$259.35 |
| 543-783 | $0-.5$ " $/ 0-12.7 \mathrm{~mm}$ | . 00005 "/0.001mm | m Lug Back | \$177.00 | \$168.15 |
| 543-783B | 0-.5"/0-12.7mm | . 00005 "/0.001mm | m Flat Back | \$177.00 | \$168.15 |
| Functions: <br> Origin-set Zeroset, $\pm$ Counting, <br> Power ON/OFF Data output, inch/ mm conversion |  | Order No. | Description | List Price | Sale Price |
|  |  | 905338 40 | 40" Cable for Indicators | $\$ 40.05$ | \$38.05 |
|  |  | 905409 8 | 80" Cable for Indicators | \$47.75 | \$45.35 |

## QM-Height High Precision ABSOLUTE Digital Height Gage

The new world standard in height measurement!

## Features

- New generation high accuracy / high resolution ABSOLUTE linear encoder for position detection
- New higher accuracy $- \pm(2.4+2.1 \mathrm{~L} / 600) \mathrm{um}$
- New pneumatic flotation system / positioning grip - allows for smooth movement along surface plate (select models)
- New large, stationary display panel with user friendly icon control keys and GO/NG LED indicator
- Digital and USB Output (New) - Supports Mitutoyo wireless SPC Output
- Long battery life with standard AA batteries (4) - Up to 300 hours ( 80 hours with regular use of pneumatic flotation function)
- Fully compatible with existing Mitutoyo Digimatic peripherals (SPC Cables, U-Wave wireless transmitters, multiplexers, etc.


Go/ $\pm$ NG judgment by LED (red, orange, green) and measurement examples

- LEDs are activated at the time of tolerance judgment - green for Go, red for +NG, and orange for -NG. "-NG", "GO" and "+NG" also appear on the LCD.



## FREE Accessories with Package (\$698.00 Total Value)



12AAC072 Depth Stylus
(\$198.00 value)


K650986 Stylus Kit ( $\$ 500.00$ value)

| Order No. | Range | Accuracy | Resolution | Remarks | List Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PROMO003 | 0-14"/ $0-350 \mathrm{~mm}$ | $\begin{aligned} & \pm(2.4+2.1 \mathrm{~L} 600) \mu \mathrm{m} \\ & \mathrm{~L}=\text { Measuring length } \\ & (\mathrm{mm}) \end{aligned}$ | $\begin{array}{\|l} 0.001 \mathrm{~mm} / 0.0005 \mathrm{~mm} \\ / .00005^{\prime \prime} / .0001^{\prime \prime} \end{array}$ |  | \$3,990.00 |
| PROMO004 | 0-24"/0-600mm |  |  |  | \$4,490.00 |
| PROMO005 | 0-14"/ $0-350 \mathrm{~mm}$ |  |  | Pneumatic Floatation System | \$4,490.00 |
| PROMO006 | 0-24"/ $0-600 \mathrm{~mm}$ |  |  | Pneumatic Floatation System | \$4,990.00 |



## Linear Height LH-600E

## The Mitutoyo Linear Height LH-600E offers advanced

 performance for reliable and easy 2D measurement.Measuring Range (stroke) 0-38"(24") / 0-972mm(600mm)

## Features

- True 2-D measurement
- High Accuracy: (1.1+0.6L/600) $\mu \mathrm{m}$ (L=Length of mm )
- Measuring Range (Stroke): 0-38" (24"), 0-972mm (600mm)
- Selectable Resolution: . 000001 " $/ .00001$ " $/ .0001$ " $/ .001$ "/0.0001mm $10.001 \mathrm{~mm} / 0.01 \mathrm{~mm} / 0.1 \mathrm{~mm}$
- Basic statistical functions are provided
- RS-232C / USB data output provides the option of evaluating measurement data externally with SPC software on a PC
- One-key operation for running semiautomatic measurement
- Data entry from a Digimatic tool
- Highest functionality: 21 parameters
- Accepts 7 different probes
- Pneumatic full/semi floating system
- Holds 60,000 data points

- Memory for 50 measuring points
- Bright, back-lit LCD

| Order No. | Description | List Price | Sale Price |
| :---: | :---: | :---: | :---: |
| $518-351 \mathrm{~A}-21$ | Linear Height Gage | $\$ 8,480.00$ | $\$ 7,632.00$ |

## Frequently used measurements




Scan this code to view a demo video of the Linear Height LH 600E


Numerous optional probes enable many types of measurement


Optional thermal printer

## Height Gages

## Digimatic Height Gages (Multi-Function Type)

Now with two resolutions and two value preset memory and increased character height for easier viewing.

## Features

- Highly versatile multi-function type.
- Carbide-tipped long scriber is provided.
- Rigid construction ensures repeatable measurement.
- Switchable resolution.

| Order No. | Range | Resolution | Accuracy | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 192-670-10 | 0-12"/0-300mm | $\begin{gathered} .0005^{\prime \prime}(0.01 \mathrm{~mm}) \\ {\left[.0002^{\prime \prime}(0.005 \mathrm{~mm})\right.} \\ \text { Switchable) }] \end{gathered}$ | $\pm 001{ }^{\prime \prime}$ | \$1,770.00 | \$1,593.00 |
| 192-671-10 | $0-18 / 10-450 \mathrm{~mm}$ |  | $\pm 0015^{\prime \prime}$ | \$2,280.00 | \$2,052.00 |
| 192-672-10 | $0-24 " / 0-600 \mathrm{~mm}$ |  | $\pm 0015^{\prime \prime}$ | \$2,920.00 | \$2,628.00 |
| 192-673-10 | $0-40$ " $/ 0-1000 \mathrm{~mm}$ |  | $\pm 0025^{\prime \prime}$ | \$5480.00 | \$4,932.00 |

- Coarse/fine feed switching.
- With SPC data output.
- Two preset reference height.

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 905338 | 40 " SPC Cable | $\$ 40.05$ | $\$ 38.05$ |
| $\mathbf{9 0 5 4 0 9}$ | $80^{\prime \prime}$ SPC Cable | $\$ 47.75$ | $\$ 45.35$ |

Functions include:

- Zero/ABS setting (ABS and INC modes)
- 2 Value Preset Memory
- Data hold
- $\pm$ Counting
- Inch/mm conversion


192-670-10


Mitutoyo Corporation suth Anshersary Since 1904

## Digimatic Height Gages (Standard Type)

Now with two resolutions and two value preset memory and increased character height for easier viewing.

| Order No. | Range | Resolution | Accuracy | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 192-630-10 | 0-12"/0-300mm | $\begin{gathered} .0005^{\prime \prime} / 0.01 \mathrm{~mm} \\ \text { or } \\ .0002^{\prime} / 0.005 \mathrm{~mm} \end{gathered}$ | $\pm .001{ }^{\prime \prime}$ | \$1,540.00 | \$1,386.00 |
| 192-631-10 | $0-18 \prime / 0-450 \mathrm{~mm}$ |  | $\pm .002 "$ | \$2,110.00 | \$1,899.00 |
| 192-632-10 | 0-24"/0-600mm |  | $\pm .002^{\prime \prime}$ | \$2,690.00 | \$2,421.00 |
| 192-633-10 | $0-401 / 0-1000 \mathrm{~mm}$ |  | $\pm 003^{\prime \prime}$ | \$5,080.00 | \$4,572.00 |


| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 905338 | $40^{\prime \prime}$ SPC Cable | $\$ 40.05$ | $\$ 38.05$ |
| 905409 | $80^{\prime \prime}$ SPC Cable | $\$ 47.75$ | $\$ 45.35$ |

Functions include:

- Zero/ABS setting (ABS and INC modes)
- 2 Value Preset Memory
- Data hold
- $\pm$ Counting
- Inch/mm conversion



## Height Gages

## ABSOLUTE Digimatic Height Gages

## Features

- Built in ABSOLUTE linear encoder This encoder eliminates the necessity of setting the reference point at every power-on. It has improved reliability because no over-speed error will occur.
- Fine-adjustment carriage to feed the slider finely.
- Carbide-tipped scriber is provided.
- With SPC data output.

| Order No. | Range | Accuracy | Resolution | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :---: |
| $570-244$ | $0-8^{\prime \prime} / 0-200 \mathrm{~mm}$ | $\pm .001^{\prime \prime}$ | $.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ | $\$ 636.00$ | $\$ 604.20$ |
| $570-248$ | $0-40^{\prime \prime} / 0-1000 \mathrm{~mm}$ | $\pm .003^{\prime \prime}$ | $.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ | $\$ 3,790.00$ | $\$ 3,600.50$ |


| Order No. | Range | Accuracy | Resolution | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :---: |
| $570-312$ | $0-12^{\prime \prime} / 0-300 \mathrm{~mm}$ | $\pm .0015^{\prime \prime}$ | $.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ | $\$ 627.00$ | $\$ 595.65$ |
| $570-313$ | $0-18^{\prime \prime} / 0-450 \mathrm{~mm}$ | $\pm .002^{\prime \prime}$ | $.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ | $\$ 880.00$ | $\$ 836.00$ |
| $570-314$ | $0-24^{\prime \prime} / 0-600 \mathrm{~mm}$ | $\pm .002^{\prime \prime}$ | $.0005^{\prime \prime} / 0.01 \mathrm{~mm}$ | $\$ 1,130.00$ | $\$ 1,073.50$ |



Large smooth slider feed wheel


Large clamp lever

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 905338 | $40^{\prime \prime}$ SPC Cable | $\$ 40.05$ | $\$ 38.05$ |
| 905409 | $80^{\prime \prime}$ SPC Cable | $\$ 47.75$ | $\$ 45.35$ |



## Dial Height Gages

Double-column structure ensures high measuring accuracy. Coarse/
Fine Feed switching. Carbide-tipped scriber.


## Features

- Easy and error-free reading with both up and down digital counters as well as a dial.
- Provided with a feed wheel for easy coarse feeding.
- Carbide-tipped scriber is provided.
- The counters and dial can be re-zeroed at any scriber position.


Easy and secure clamping


Easy and error free reading

## Rectangular Steel Gage Block Sets



516-902-26

## Gage Block Production

Mitutoyo has been producing gage blocks for more than 70 years. Since the time when the Numata Research laboratory entered the market on a fullscale production basis, the production of Mitutoyo gage blocks now exceeds a total of 23 million pieces in 45 years, and they continue to be used all over the world. Advanced processing techniques have been cultivated by Mitutoyo over the years with its research and development advancing measurement technology and creating new products, such as new types of gage block, as well as leading-edge measuring equipment for gage block evaluation. With a reputation for innovation and reliability endorsed by history, and an extensive sales/service network stretching throughout the world, Mitutoyo continues to support manufacturing industries wherever they may be found.

## Mitutoyo Quality

| Order No. | Blocks per Set | Grade | Size | Step | Qty | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 516-902-26 | 81 | 0 | .1001-.1009" | . $0001{ }^{\prime \prime}$ | 9 | \$1,970.00 | \$1,773.00 |
|  |  |  | . 101 - .149" | .001" | 49 |  |  |
|  |  |  | . 05 - .95" | .05" | 19 |  |  |
|  |  |  | 1-4" | $1^{\prime \prime}$ | 4 |  |  |
| 516-903-26 | 81 | AS-1 | .1001-.1009" | . 0001 " | 9 | \$1710.00 | \$1,539.00 |
|  |  |  | .101-.149" | .001" | 49 |  |  |
|  |  |  | .05-.95". | .05" | 19 |  |  |
|  |  |  | 1-4" | $1^{\prime \prime}$ | 4 |  |  |
| 516-904-26 | 81 | AS-2 | .1001-.1009" | . 0001 " | 9 | 1,550.00 | \$1,395.00 |
|  |  |  | .101-.149" | .001" | 49 |  |  |
|  |  |  | .05-.95" | .05" | 19 |  |  |
|  |  |  | 1-4" | $1{ }^{\prime \prime}$ | 4 |  |  |
| 516-914-26 | 35 | 0 | .10005" |  | 1 | \$1,040.00 | \$936.00 |
|  |  |  | .1001-.1009" | . 0001 " | 9 |  |  |
|  |  |  | .101-.149" | .001" | 9 |  |  |
|  |  |  | .11-.19" | .01" | 9 |  |  |
|  |  |  | .1-.3" | .1" | 3 |  |  |
|  |  |  | .5, 1, 2, 4" |  | 4 |  |  |
| 516-946-26 | 87 | 0 | $1.001-1.009 \mathrm{~mm}$ | 0.001 mm | 9 | \$2,790.00 | \$2,511.00 |
|  |  |  | $1.01-1.49 \mathrm{~mm}$ | 0.01 mm | 49 |  |  |
|  |  |  | $0.5-9.5 \mathrm{~mm}$ | 0.5 mm | 19 |  |  |
|  |  |  | $10-100 \mathrm{~mm}$ | 10 mm | 10 |  |  |
| 516-947-26 | 87 | AS-1 | $1.001-1.009 \mathrm{~mm}$ | 0.001 mm | 9 | \$2,460.00 | \$2,214.00 |
|  |  |  | $1.01-1.49 \mathrm{~mm}$ | 0.01 mm | 49 |  |  |
|  |  |  | $0.5-9.5 \mathrm{~mm}$ | 0.5 mm | 19 |  |  |
|  |  |  | 10-100mm | 10 | 10 |  |  |


| Order No. | Blocks per Set | Grade | Blocks Incl. In Set | Remarks | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 516-930-26 | 9 | 0 | $\begin{gathered} .0625^{\prime \prime}, .100^{\prime \prime}, \\ .125^{\prime \prime}, 200^{\prime \prime}, .250^{\prime \prime} \\ .300^{\prime \prime}, .500^{\prime \prime} 1^{\prime \prime}, 2^{\prime \prime} \end{gathered}$ | Optical parallel ( $\mathrm{t}=.5^{\prime \prime}$ ) | \$360.00 | \$324.00 |
| 516-931-26 | 9 | AS-1 |  |  | \$314.00 | \$282.60 |
| 516-935-26 | 9 | AS-1 | $\begin{gathered} .0625^{\prime \prime}, .100^{\prime \prime \prime} \\ .125^{\prime \prime}, 200 ;, .250^{\prime \prime \prime} \\ .300^{\prime \prime}, .500^{\prime \prime}, 1^{\prime \prime}, 2^{\prime \prime} \end{gathered}$ | Optical parallel $\left(t=.5^{\prime \prime}\right)$ | \$242.00 | \$217.80 |

## Square Steel Gage Block Set



| Order No. | Blocks per Set | Grade | Size | Step | Qty | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 516-402-26 | 81 | 0 | .1001" - .1009" | 0.0001" | 9 | \$2,820.00 | \$2,538.00 |
|  |  |  | .101" - .149" | 0.001" | 49 |  |  |
|  |  |  | .05" - . $95^{\prime \prime}$ | 0.05" | 19 |  |  |
|  |  |  | 1" - 4" | $1{ }^{\prime \prime}$ | 4 |  |  |

## Data Collection/SPC

## Mitutoyo SPC Cables

Mitutoyo SPC cables for tools with Mitutoyo Digimatic SPC output.


| Order No. | Length | Pins | For Use With | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| With Data Out Switch |  |  |  |  |  |
| 05CZA624 | 40" | - | IP66/67 Calipers | \$93.90 | \$89.20 |
| 05CZA625 | 80" | - | IP66/67 Calipers | \$95.35 | \$90.60 |
| 05CZA662 | 40 " | - | IP65 Micrometers | \$83.80 | \$79.60 |
| 05CZA663 | 80" | - | IP65 Micrometers | \$92.45 | \$87.85 |
| 959149 | 40 " | - | Height Gage 570 Series, Digimatic Indicator 543 and 575 Series, Digimatic Scale Unit 572 Series, Digimatic Absolute Calipers | \$49.25 | \$46.80 |
| 959150 | 80" | - | Height Gage 570 Series, Digimatic Indicator 543 and 575 Series, Digimatic Scale Unit 572 Series, Digimatic Absolute Calipers | \$55.20 | \$52.45 |
| Without Data Out Switch |  |  |  |  |  |
| 937387 | 40" | 6 | Borematic 568 Series | \$50.85 | \$48.30 |
| 965013 | 80" | 6 | Borematic 568 Series | \$60.10 | \$57.10 |
| 905338 | $40^{\prime \prime}$ | - | Height Gage 570 Series, Digimatic Indicator 543 and 575 Series, Digimatic Scale Unit 572 Series | \$40.05 | \$38.05 |
| 905409 | 80" | - | Height Gage 570 Series, Digimatic Indicator 543 and 575 Series, Digimatic Scale Unit 572 Series | \$47.75 | \$45.35 |

## Multiplexers - MIG-8USB, MIG-4USB

## Features

- A measurement data transfer device, multiplexer MIG-8USB and MIG-4USB converts digimatic output measurement data to RS-232C and outputs it to an external device such as PC.


64AAB386
Front view


64AAB386
Back view

| Model No. | MIG-8USB | MIG-4USB |
| :--- | :---: | :---: |
| Order No. | 64AAB386 | 64 AAB387 |
| Gage Capacity | 8 | 4 |
| Dimension $(\mathrm{mm})$ W $\times$ D $\times$ H | $146 \times 150 \times 45$ | $146 \times 150 \times 70$ |
| Mass $(\mathrm{g})$ | 540 | 710 |
| List Price | $\$ 1,340.00$ | $\$ 830.00$ |
| Sale Price | $\$ 1,273.00$ | $\$ 788.50$ |

MeasurLink ${ }^{\circ}$ ENABLED
Data Management Software by Mitutoyo

## Digimatic Mini-Processor

| Order No. | Description | List Price | Sale Price |
| :--- | :---: | :---: | :---: |
| 264-504-5A | DP - 1VR | $\$ 506.00$ | $\$ 480.70$ |



Mitutoyo Corporation 60th Amiarary

## Features

- This is a palm-sized printer used to print measurement data from the digimatic gage or to perform statistical analysis.
- This printer offers excellent functionality. You can use it not only to print measurement data, perform a variety of statistical analyses, and draw a histogram or D chart but also to perform complicated operations for X-R control chart.
- Equipped with RS-232C output and GO/NG judgment output as standard functions, this processor ensures high reliability as an advanced quality inspection machine.
- The line thermal printer enables fast and quiet printing.


Measuring instrument
with digimatic output


## USB-ITN types



Each type of USB-ITN has a unique plug to fit the instrument it is designed for (figures $\mathbf{A}$ to $\mathbf{G}$ on the left).
Just select the type that fits your measuring instrument (USB-ITN-A, USB-ITN-B,...). Detailed specifications, such as part numbers, are shown on page 5 .


Supported operating systems: Windows 2000 SP4 Windows XP SP2 or later Windows Vista Windows 7

Sale Price $\$ 177^{30}$

Our Regular Price: \$197.00 For All Input Tools

Determine the plug type suitable for your measuring instrument (one of the seven types from $\mathbf{A}$ to $\mathbf{G}$ ) in the following table, and then select the corresponding USB Input Tool Direct.

| Model | USB-ITN-A | USB-ITN-B | USB-ITN-C | USB-ITN-D | USB-ITN-E | USB-ITN-F | USB-ITN-G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Order No. | 06ADV380A | 06ADV380B | 06ADV380C | 06ADV380D | 06ADV380E | 06ADV380F | 06ADV380G |
| Whether the existence of a data switch affects usability | Incorporates a data switch, so the tool is usable regardless of whether or not the measuring instrument has a switch. |  |  | Does not incorporate a data switch, so an instrument fitted with a switch is required in order to use the instrument alone. (However, the tool can be used with USB-ITPAK.) |  |  |  |
| Cable type | $\mathbf{A}_{\text {switch }}^{\text {Water-proof with }}$ | B <br> Water-proof with switch | CWith switch | D 10-pin plain | E 6-pin round | F Straight type | G Water-proof straight type |
| Illustration of the plug that connects to the measuring instrument |  |  | (100 |  |  | - |  |
| Socket type on the measuring instrument |  |  |  |  |  |  | $0 \quad 0$ |
| Codes of major compatible measuring instruments | [Digimatic Caliper /Super Caliper] -500 series $-550 / 551$ series [Digimatic Carbon Fiber Caliper] -552 series [Digimatic Depth Gage] -571 series [Digimatic Scale Unit] -572 series [Digimatic Exclusive Caliper] -573 series | [Digimatic <br> Micrometer, <br> QuantuMike] <br> -293series <br> [Tubular Inside <br> Micrometer] <br> -337 series <br> -339 series <br> [Digimatic <br> Micrometer <br> Head] <br> -350 series <br> [Digimatic Exclusive <br> Micrometer] <br> (The end of the mark is- <br> -468 series | [Digimatic Micrometer Head] -164 series [Digimatic Caliper] -500 series <br> - 550/ 551 <br> [Digimatic Depth Gage] <br> -571 series <br> [Digimatic Scale Unit] <br> -572 series <br> [Digimatic <br> Exclusive Caliper] <br> -573 series | Measuring instrument <br> [Surface Roughness Tester] <br> -178 series <br> [Coating Thickness Gage] <br> -179 series <br> [Linear Height] <br> -518 series <br> [Reference Gage] <br> -515 series <br> [Digimatic Indicator] <br> -543 series <br> [Laser Scan Micrometer] <br> -544 series <br> [ $\mu$-checker] <br> Digital <br> $\mu$-checker <br> (Using the foot switch) | models that incorporate <br> [Digimatic Micrometer] <br> -121 series <br> -164 series <br> -227 series <br> -293 series <br> [Tubuar Inside Micrometer] <br> -337 series <br> [Tubular Inside Micrometer] <br> - 339 series <br> [Digimatic Holtest] <br> -468 series <br> [Reference Gage] <br> -515 series <br> [Borematic] <br> -568 series <br> [Hardness Testing Machines] <br> -810 series | a data switch <br> [Digimatic Height Gage] <br> -192/570/574 series <br> [Digimatic Caliper] <br> -500/550/551 series <br> [Digimatic Bore Gage] <br> - 511 series <br> [Digimatic Indicator] <br> -543 seires <br> [Digimatic Depth Gage/ <br> Digimatic Thickness Gage] <br> -547 series <br> Digimatic model <br> [Digimatic Cabon Fiber Caliper] <br> -552 series <br> [Digimatic Scale Unit] <br> -572 series <br> [Portable Hardness <br> Testing Instruments] <br> -811 series | [Digimatic Indicator] -543 series |
|  |  |  |  | Measuring instrument models that do not have a data switch |  |  |  |
|  |  |  |  | [Digimatic Indicator] -543 series ID-F [Linear Gage/Counter] $-\mathbf{5 4 2}$ series [Litematic] $-\mathbf{- 3 1 8}$ series | No corresponding models | [Digimatic Indicator] -543 series [Digimatic Depth Gagel Digimatic Thickness Gage] -547 series Digimatic model -575 series | No corresponding models |

## U-Wave Wireless System

## U-Wave Wireless Data Communication System

The U-WAVE system enables easy wireless data communication from a measuring tool to a PC using the Digimatic protocol. Measurement efficiency is improved by eliminating long and cumbersome data cables. The user-friendly interface allows data to be loaded into any software product that accepts keyboard input, such as Excel or Notepad.


How to "Spec" a U-Wave System:

1. One U-Wave-R required per system (will support up to 100 U-Wave-T): Order No. 02AZD810D
2. One U-Wave-T required per tool: Order No. 02AZD730D
3. Select the required connecting cable (cable length approx. 6").

Use the convenient U-Wave Cable Selection Chart to convert your existing cable part number to the corresponding U-Wave cable order number.


## U-Wave-R

Features

- Supports up to 100 U-Wave-T
- Comes complete with U-WavePak set-up/data input software.
- U-WavePak, standard with U-Wave-R features a keyboard interface function. This allows measurement data to be easily entered into in Excel, Notepad or other formats that accepts numeric value input via a keyboard.
- Supplied with USB connecting cable.
- MeasurLink ${ }^{\circledR}$ V6.1 Real-Time PLUS supports the U-Wave System.


## U-Wave-T

Features

- Is IP67 rated
- IP67 cables available for your Mitutoyo waterproof tools.
- Battery life approx. 400,000 data transmissions.
- Up to 60 feet transmission range Actual range depends on the local radio transmission characteristics.

| Order No. | Description | Use For Cables | List Price | Sale Price |
| :--- | :--- | :--- | :---: | :---: |
| 02AZD810D | U-Wave-R |  | $\$ 499.00$ | $\$ 449.10$ |
| 02AZD730D | U-Wave-T |  | $\$ 220.00$ | $\$ 198.00$ |
| 02AZD790A | U-Wave Connecting Cable A | 05CZA624 or 05CZA625 | $\$ 110.00$ | $\$ 99.00$ |
| 02AZD790B | U-Wave Connecting Cable B | $05 C Z A 662$ or 05CZA663 | $\$ 110.00$ | $\$ 99.00$ |
| 02AZD790C | U-Wave Connecting Cable C | 959149 or 959150 | $\$ 110.00$ | $\$ 99.00$ |
| 02AZD790D | U-Wave Connecting Cable D | 936937 or 965014 | $\$ 110.00$ | $\$ 99.00$ |
| 02AZD790E | U-Wave Connecting Cable E | 937387 or 965013 | $\$ 110.00$ | $\$ 99.00$ |
| 02AZD790F | U-Wave Connecting Cable F | 905338 or 905409 | $\$ 110.00$ | $\$ 99.00$ |
| 02AZD790G | U-Wave Connecting Cable G | 21EAA194 or 21EAA190 | $\$ 110.00$ | $\$ 99.00$ |

## MeasurLinkº Real Time Data Collection Software

MeasurLink 7 Real-Time Standard Edition is designed for customers who want to acquire and analyze data in real-time and check variable and attribute inspection to maximize production and minimize defects. It has views to allow the user to create Parts, Characteristics with nominal and tolerance and Traceability lists. The data collection interface provides real-time graphics for Run charts, Control charts, Histograms and Statistics. Standard views include Datasheet (observations and charts), Classic View (chart windows), and the 2D view (part images with callouts that include charts and statistical data). Full reporting template functionality is also provided. Supported data sources include keyboard, RS232 and USB devices.
MeasurLink 7 Real-Time Professional Edition enables customers to connect and acquire data from Mitutoyo Coordinate Measuring Machines, Vision and Form Measuring Systems via native integration (DDE). ASCll and QMD (xml-based) file imports are also supported. In addition to all of the features supported by MeasurLink 7 Real-Time Standard Edition, this application also supports data filters. Full reporting functionality with templates is also provided. Supported data sources include keyboard, RS232C and USB devices, native Mitutoyo integration (DDE), ASCII and QMD (xml-based) file imports.


MeasurLink 7 Real-Time Professional 3D Edition is designed for customers who wish to collect data using the Hoops 3D graphics view. Hoops 3D files can be exported from most CAD systems and provides the operator with a real view of the part. Camera angle and position can be saved for each characteristic providing for an intuitive prompted guided sequencing for the inspector. Supported data sources include keyboard, RS232C and USB devices, native Mitutoyo integration (DDE), ASCII and QMD (xml-based) file imports.


## Database Management System (DBMS) Requirements

MeasurLink 7 ships with a copy of Microsoft® SQL Server Express Edition 2008 R2, this can be for a standalone or a workgroup installation.
MeasurLink 7 also supports the following Microsoft SQL Server versions:

- Microsofte SQL Server 2008 Standard Edition
- Microsofte SQL Server 2008 Enterprise Edition
- Microsoft® SQL Server 2005 Workgroup Edition
- Microsofte SQL Server 2005 Standard Edition


## Operating System Requirements

All MeasurLink 7 products are supported on the following Microsoft ${ }^{\ominus}$ Windows Operating System versions:

- All Windows XP SP3 versions
- All Windows Vista SP2 versions
- All Windows 7 versions
- Both 32bit and 64bit operating systems supported
** Note: All product media will contain installers for both 32bit and 64bit systems


## PC (OS Specific Hardware Requirements (Network)



## Digimatic Scales

## ABSOLUTE Digimatic Scale Units

## Features

- The ORIGIN key allows setting of an absolute zero point to be used as reference in subsequent measurements. Once set, the ABS Digimatic Scale Unit is ready to show its true position whenever turned on rather than 0.00 " as with standard models.
- The ZERO/ABS key allows the display to be zero-set at any slider position along the beam for incremental comparison measurements. This key will also allow return to the absolute coordinate with a display of the true position from the origin point.
- No rack, no pinion, no glass scale. Digimatic Scale Unit is safely embedded in the hardened stainless steel blade.
- Horizontal or vertical face according to the scale mounting direction.
- Special type that is provided with diameter displaying function is available for lathes.
- All units come with two mounting brackets, each located at either end of the scale.
- With SPC data output.

| Order No | Model | Range | Accuracy | Resolution | Type | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 572-210-20 | SD-4"DX | 0-4" / 0-100mm | .001" / 0.03mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal single-function | \$235.00 | \$223.25 |
| 572-211-20 | SD-6"DX | 0-6" / 0-150mm | .001" / 0.03mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal single-function | \$249.00 | \$236.55 |
| 572-212-20 | SD-8"DX | 0-8" / 0-200mm | . 001 " / 0.03 mm | .0005i" / 0.01 mm | Horizontal single-function | \$290.00 | \$275.50 |
| 572-213-10 | SD-12"D | 0-12" / 0-300mm | .002" / 0.04mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal single-function | \$559.00 | \$531.05 |
| 572-310-10 | SD-6"D | 0-4" / 0-100mm | . 001 " / 0.03mm | . $0005{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical single function | \$260.00 | \$247.00 |
| 572-311-10 | SD-6"D | 0-6" / 0-150mm | .001" / 0.03mm | . $0005{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical single-function | \$276.00 | \$262.20 |
| 572-312-10 | SD-8"D | 0-8" / 0-200mm | . 001 " / 0.03mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical single function | \$320.00 | \$304.00 |
| 572-313-10 | SD-12"D | 0-12" $/ 0-300 \mathrm{~mm}$ | .002" / 0.04 mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical single function | \$616.00 | \$585.20 |
| 572-474 | SD-18"E | 0-18" / 0-450mm | .002" / 0.04mm | . $0000{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal multi-function | \$782.00 | \$742.90 |
| 572-475 | SD-24"E | 0-24" / 0-600mm | .002" / 0.04mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal multi-function | \$867.00 | \$823.65 |
| 572-476 | SD-32"E | 0-32" / 0-800mm | .0025" / 0.06mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal multi-function | \$1380.00 | \$1,311.00 |
| 572-477 | SD-40"E | 0-40" / 0-1000mm | . $0025^{\prime \prime} / 0.06 \mathrm{~mm}$ | . $0005{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Horizontal multi-function | \$1500.00 | \$1,425.00 |
| 572-574 | SDV-18"E | 0-18" / 0-450mm | .002" / 0.04 mm | . $0005{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical multi-function | \$782.00 | \$742.90 |
| 572-575 | SDV-24"E | $0-24^{\prime \prime} / 0-600 \mathrm{~mm}$ | .002" / 0.04 mm | . $0005{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical multi-function | \$867.00 | \$823.65 |
| 572-576 | SDV-32"E | 0-32" / 0-800mm | .0025" / 0.06mm | . $00005^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical multi-function | \$1380.00 | \$1,311.00 |
| 572-577 | SDV-40"E | 0-40" / 0-1000mm | . 0025 " / 0.06 mm | . $0000{ }^{\prime \prime} / 0.01 \mathrm{~mm}$ | Vertical multi-function | \$1500.00 | \$1,425.00 |

## Digital Readout

## Purchase any DRO Package and Receive a Free Dial Test Indicator \& Flexible Magnetic Stand!*


*To receive your free Test Indicator and Stand log on to www.mitutoyo.com and select About>Contacting MAC->Product Registration. Fill out and submit the form and a Test Indicator and Stand will be shipped to you.


| Order No. | Description | X Travel | Y Travel | Z Travel | X Axis type | Y Axis type | Z Axis type | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 64PKA058 | $12^{\prime \prime} \times 30$ DRO Mill Pkg | $30^{\prime \prime}$ | $12^{\prime \prime}$ |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA059 | $12^{\prime \prime} \times 36^{\prime \prime}$ DRO Mill Pkg | $36^{\prime \prime}$ | $12^{\prime \prime}$ |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA060 | $14^{\prime \prime}$ X 30 " DRO Mill Pkg | $30^{\prime \prime}$ | $14^{\prime \prime}$ |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA061 | $14^{\prime \prime} \times 40$ D DRO Mill Pkg | $40^{\prime \prime}$ | $14^{\prime \prime}$ |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA062 | $16^{\prime \prime} \times 36^{\prime \prime}$ DRO Mill Pkg | $36^{\prime \prime}$ | $16^{\prime \prime}$ |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA063 | $16^{\prime \prime}$ X 40 " DRO Mill Pkg | $40^{\prime \prime}$ | $16^{\prime \prime}$ |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA064 | $18^{\prime \prime} \times 40$ D DRO Mill Pkg | $40^{\prime \prime}$ | 18" |  | AT715 | AT715 |  | \$1,490.00 | \$1,341.00 |
| 64PKA065 | $12^{\prime} \times 30^{\prime \prime} \times 6^{\prime \prime}$ Mill Pkg | 30" | $12^{\prime \prime}$ | $6^{\prime \prime}$ | AT715 | AT715 | AT715 | \$2,220.00 | \$1,998.00 |
| 64PKA066 | $12^{\prime} \times 36^{\prime \prime} \times 6^{\prime \prime}$ Mill Pkg | $36^{\prime \prime}$ | $12^{\prime \prime}$ | $6^{\prime \prime}$ | AT715 | AT715 | AT715 | \$2,220.00 | \$1,998.00 |
| 64PKA067 | $16^{\prime} \times 36^{\prime \prime} \times 6^{\prime \prime}$ Mill Pkg | $36^{\prime \prime}$ | $16^{\prime \prime}$ | $6^{\prime \prime}$ | AT715 | AT715 | AT715 | \$2,220.00 | \$1,998.00 |
| 64PKA035 | $6^{\prime \prime} \times 28^{\prime \prime}$ Lathe Pkg | $6 "$ |  | 28 " | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA036 | 6" $\times 30$ " Lathe Pkg | 6 " |  | $30^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA037 | $6^{\prime \prime} \times 36^{\prime \prime}$ Lathe Pkg | $6^{\prime \prime}$ |  | $36^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA038 | 6" $\times 40$ " Lathe Pkg | 6 " |  | $40^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA039 | $8^{\prime \prime} \times 40$ " Lathe Pkg | 8" |  | $40^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA040 | $8^{\prime \prime} \times 44^{\prime \prime}$ Lathe Pkg | 8" |  | $44^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA041 | $8^{\prime \prime} \times 48^{\prime \prime}$ Lathe Pkg | 8" |  | $48^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA042 | 10" X 40" Lathe Pkg | $10^{\prime \prime}$ |  | $40^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA043 | 10" X 44" Lathe Pkg | 10" |  | $44^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA044 | 10" X 48" Lathe Pkg | 10" |  | 48" | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA045 | 10" X 60 " Lathe Pkg | 10" |  | $60^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA046 | $12^{\prime \prime} \times 40$ " Lathe Pkg | $12^{\prime \prime}$ |  | $40^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA047 | $12^{\prime \prime}$ X $44^{\prime \prime}$ Lathe Pkg | $12^{\prime \prime}$ |  | $44^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA048 | $12^{\prime \prime} \times 48^{\prime \prime}$ Lathe Pkg | $12^{\prime \prime}$ |  | $48^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA049 | 12" X 52" Lathe Pkg | $12^{\prime \prime}$ |  | $52^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA050 | $12^{\prime \prime} \mathrm{X} 60$ " Lathe Pkg | $12^{\prime \prime}$ |  | 60" | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA051 | 12" X 72 " Lathe Pkg | $12^{\prime \prime}$ |  | $72^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA052 | 14" X 40 " Lathe Pkg | $14^{\prime \prime}$ |  | $40^{\prime \prime}$ | AT116 |  | AT715 | \$1,680.00 | \$1,512.00 |
| 64PKA053 | 14" X 44" Lathe Pkg | $14^{\prime \prime}$ |  | $44^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA054 | 14" X 48" Lathe Pkg | $14^{\prime \prime}$ |  | $48^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA055 | 14" X 52" Lathe Pkg | $14^{\prime \prime}$ |  | $52^{\prime \prime}$ | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA056 | 14" X 60" Lathe Pkg | $14^{\prime \prime}$ |  | 60 " | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA057 | $16^{\prime \prime} \times 60$ " Lathe Pkg | $16^{\prime \prime}$ |  | 60" | AT116 |  | AT715 | \$2,040.00 | \$1,836.00 |
| 64PKA026 | $6^{\prime \prime} \times 12^{\prime \prime}$ Grinder Pkg |  | $12^{\prime \prime}$ | $6^{\prime \prime}$ |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA027 | $6^{\prime \prime} \times 14^{\prime \prime}$ Grinder Pkg |  | $14^{\prime \prime}$ | $6^{\prime \prime}$ |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA028 | 8" $\times 12^{\prime \prime}$ Grinder Pkg |  | $12^{\prime \prime}$ | $8^{\prime \prime}$ |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA029 | $8^{\prime \prime} \times 14^{\prime \prime}$ Grinder Pkg |  | $14^{\prime \prime}$ | $8^{\prime \prime}$ |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA030 | $8^{\prime \prime} \times 16^{\prime \prime}$ Grinder Pkg |  | $16^{\prime \prime}$ | $8^{\prime \prime}$ |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA031 | $10^{\prime \prime} \times 18^{\prime \prime}$ Grinder Pkg |  | $18^{\prime \prime}$ | 10 |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA032 | 10" X 24" Grinder Pkg |  | $24^{\prime \prime}$ | 10 |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA033 | $12^{\prime \prime} \times 18^{\prime \prime}$ Grinder Pkg |  | 18" | 12 |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |
| 64PKA034 | 12" X 20" Grinder Pkg |  | $20^{\prime \prime}$ | 12 |  | AT116 | AT116 | \$1,620.00 | \$1,458.00 |



## PH-A14 Horizontal Profile Projector

## Features

- Mitutoyo's lens technology and workmanship combine to provide a bright, crisp image for error free inspection
- $8^{\prime \prime} \times 4^{\prime \prime}$ floating-type workstage incorporates linear scales for fast, accurate measurement
- The workstage provides high accuracy and can handle a workload of up to 100 lbs .
- $10 x$ objective lens and fiber illuminator are standard accessories


## PV-5110 Profile Projector

## Features

- Large 500 mm screen
- Floor model that uses a downward illumination system.
- Digital readout protractor screen (including zero-setting, ABS/INC coordinate switching functions) for easy and error-free angle measurement.
- Angled screen allows projected images to be easily traced or compared with a template.
- The oblique surface illumination system provides clear and bright images, allowing easy inspection of non-reflective workpieces such as plastic parts or printed materials.


## Standard Accessories

- $200 \times 100 \mathrm{~mm}$ ( $8^{\prime \prime} \times 4^{\prime \prime}$ ) stage
- 10x projection lens set
- Surface illumination unit
- Counter stand for KA counter
- Power cord, halogen bulb, fuse, grounding wire, allen wrench, vinyl cover


PV-5110

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 304-919A | Profile Projector PV-5110 | $\$ 24,200.00$ | $\$ 21,780.00$ |
| 264-156A | QM-Data200 (Arm-Mount Model) | $\$ 2,720.00$ | $\$ 2,584.00$ |
| 332-151 | Optoeye-200 | $\$ 1,650.00$ | $\$ 1,320.00$ |
| 12AAE672 | Attachment (B) for Optoeye-200 | $\$ 58.65$ | $\$ 52.80$ |
| 174-173A | KA Counter | $\$ 587.65$ | $\$ 528.30$ |

with optional KA counter

## Proffle Projectors

## PH-3515F Horizontal Profile Projector

## Features

- Heavy-Duty, bench-top model with horizontal optical system
- Erect image on Day-bright screen
- $14^{\prime \prime}(356 \mathrm{~mm})$ dia. protractor screen with crosshair line for easy alignment
- Floating-type workstage incorporates linear scales for fast, accurate measurement
- Suitable for thread pitch measurements - free from blurred or distorted images when the workpiece is angled

| Order No. | Description | List Price | Package Price |
| :--- | :--- | :---: | :---: |
| 64PKA088A | PH-3515F Profile Projector w/QM Data (Arm Mount) | $\$ 13,500.00$ | $\$ 12,825.00$ |
| 64PKA089A | PH-3515F Profile Projector w/KA counter \& tray | $\$ 11,600.00$ | $\$ 11,020.00$ |
| 64AAB176 | PH-3515 Stand (optional) | $\$ 687.00$ | $\$ 652.65$ |



## PJ-A3000 Vertical Profile Projector



## Features

- A series of midssize profile projectors featuring bright, $12.40^{\prime \prime}(315 \mathrm{~mm})$ diameter screens and easy-tooperate XY measurement tables.
- A floating table makes measuring quicker and easier.
- Easy-to-read digital counters are located near the projection screen, thereby minimizing strain associated with excessive movement.
- For edge sensing capabilities, order the Optoeye-200, part number 332-151

| Order No. | Description | XY Range | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- |
| 302-701A | PJ-A3010F-200 | $8^{\prime \prime} \times 4^{\prime \prime}$ | $\$ 13,600.00$ | $\$ 12,240.00$ |
| 302-703A | PJ-A3010F-100 | $3.94^{\prime \prime} \times 3.94^{\prime \prime}$ | $\$ 10,800.00$ | $\$ 9,720.00$ |

## Optional Accessories

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 264-156A | QM-Data 200 | $\$ 2,720.00$ | $\$ 2,584.00$ |
| 332-151 | Optoeye 200 | $\$ 1,650.00$ | $\$ 1,320.00$ |
| 64PMI167 | Stand for PJ-A3000 | $\$ 688.00$ | $\$ 653.60$ |
| 12AAA807 | RS-232C Cable | $\$ 54.30$ | $\$ 51.60$ |
| 12AAE671 | Attachment board (A) | $\$ 40.80$ | $\$ 36.70$ |



## Vertical Profile Projectors

The main advantage of a vertical profile projector is the ability to place flexible parts such as gaskets directly on the stage glass allowing "gravity" to hold the part in place.


## Horizontal Profile Projectors

The chief advantage of a horizontal projector is the ability to measure larger/heavier parts than could be measured on a vertical comparator.

## Laser Scan Micrometers

## Bench Top Non-Contact Measuring System

Features

- Integrated display and measuring unit into one unit
- Ideal for bench-top measurement in an inspection room
- Statistical calculation mode
- RS-232C interface, I/0 interface, and SPC output interface are provided as standard
- Includes Quicktool*, a free software package that makes operation of LSM setting simple and easy *For use with customer supplied PC and RS-232C cable

| Order No. | Description | Range | Resolution | List Price | Sale Price |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $544-116-1 \mathrm{~A}$ | LSM-9506 Bench Top Laser Micrometer | $.020^{\prime \prime}-2.36^{\prime \prime} / 0.5 \mathrm{~mm}-60 \mathrm{~mm}$ | $.000002^{\prime \prime}-.005^{\prime \prime} / 0.00005-0.1 \mathrm{~mm}$ | $\$ 8,940.00$ | $\$ 8,046.00$ |

## High Accuracy Non-Contact Measuring Systems

## Features

- Excellent linearity: down to +/- 0.3 microns
- High speed scanning capable: 3200 scans per second
- Various ranges available for selecting the best laser for your application
- Statistical calculation mode
- Includes Quicktool*, a free software package that makes operation of LSM setting simple and easy *For use with customer supplied PC and RS-232C cable


## LSM-6200 Display Unit Included!

It's memory function has been increased to allow storage of up to 100 programs and includes a built in program to measure odd fluted drills and endmills.

| Order No | Model | Range Inch | Range mm | Repeatability | Linearity | Scanning Rate | List Price | Sale Price |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| 64PKA117 | LSM-500S | $.0002^{\prime \prime}-.08^{\prime \prime}$ | $0.005 \sim 2 \mathrm{~mm}$ | $\pm 0.03 \mu \mathrm{~m}$ | $\pm 0.3 \mu \mathrm{~m}$ | $3,200 \mathrm{scans} / \mathrm{sec}$ | $\$ 10,370.00$ | $\$ 9,333.00$ |
| 64PKA118 | LSM-501S | $.002^{\prime \prime}-.4^{\prime \prime}$ | $0.05 \sim 10 \mathrm{~mm}$ | $\pm 0.04 \mu \mathrm{~m}$ | $\pm 0.5 \mu \mathrm{~m}$ | $3,200 \mathrm{scans} / \mathrm{sec}$ | $\$ 9,330.00$ | $\$ 8,397.00$ |
| 64PKA119 | LSM-503S | $.012^{\prime \prime}-1.18^{\prime \prime}$ | $0.3 \sim 30 \mathrm{~mm}$ | $\pm 0.11 \mu \mathrm{~m}$ | $\pm 1.0 \mu \mathrm{~m}$ | $3,200 \mathrm{scans} / \mathrm{sec}$ | $\$ 10,110.00$ | $\$ 9,099.00$ |
| 64PKA120 | LSM-506S | $.04^{\prime \prime}-2.36^{\prime \prime}$ | $1 \sim 60 \mathrm{~mm}$ | $\pm 0.36 \mu \mathrm{~m}$ | $\pm 3 \mu \mathrm{~m}$ | $3,200 \mathrm{scans} / \mathrm{sec}$ | $\$ 11,480.00$ | $\$ 10,332.00$ |
| 64PKA121 | LSM-512S | $.04^{\prime \prime}-4.72^{\prime \prime}$ | $1 \sim 120 \mathrm{~mm}$ | $\pm 0.85 \mu \mathrm{~m}$ | $\pm 6 \mu \mathrm{~m}$ | $3,200 \mathrm{scans} / \mathrm{sec}$ | $\$ 17,680.00$ | $\$ 15,912.00$ |
| 64PKA122 | LSM-516S | $.04^{\prime \prime}-6.30^{\prime \prime}$ | $1 \sim 160 \mathrm{~mm}$ | $\pm 1.4 \mu \mathrm{~m}$ | $\pm 7 \mu \mathrm{~m}$ | $3,200 \mathrm{scans} / \mathrm{sec}$ | $\$ 28,480.00$ | $\$ 25,632.00$ |




$X$ - and $Y$-axis measurement of electric cables and fibers


Measurement of form


## Litematic and Litematic Head High-resolution Measuring Unit <br> 

## Features

- The Litematic is designed for measuring easily-deformed workpieces and high-precision parts such as pin gages, thin-wall bearings, plastic parts, and springs.
- Extra-low measuring force of 0.01 N ( 1 gf ).
- Hands free operation with optional foot switch.
- Ceramic anvil is free from corrosion and easy to maintain.
- The Litematic Head unit can be mounted onto fixtures or an optional stand to allow great flexibility of use.
- With SPC output.

| Order No. | Resolution | Range | Accuracy (at 20 |
| :--- | :--- | :--- | :--- | :--- | :--- |



318-221A


## Film and sheet

If the workpiece flexes, making accurate measurement impossible, using a type with a larger measuring force or adding a weight to the spindle may be effective.


Rubber and plastic
If the workpiece is soft the risk of indentation may be reduced by replacing the standard contact point with one of larger radius, such as an optional carbide-ball type.


## Precision components

The Litematic can be used as a high-precision displacement gage.


## Electronic components

For this type of workpiece the smallest measuring force available is recommended.


## Thin sheet metal

Because the measuring force is small, deformation of the workpiece can be minimized.


Medical and pharmaceutical products
If the workpiece is soft the risk of indentation may be reduced by replacing the standard contact point with one of larger radius, such as an optional carbide-ball type.


## Rockwell Hardness Tester

## With Real-Time Electronic Test Force Control



Features

- Closed-loop control of testing forces
- Primary and final forces (loads) are applied with unparalleled accuracy and repeatability
- Extended indenter arm reaches inside diameters and hard to reach surfaces at eye level, allowing the operator to easily see where the indenter addresses small or hard to reach parts
- Automatic setting of preliminary test force and application of total test force
- Indenter escape function allows automatic removal of preliminary test force at end of test cycle
- Touch screen operation with a back-lit LCD graphic display
- Hardness scale is set automatically via the touch screen
- Cylindrical and spherical surface compensation
- Auto conversion to all hardness scales or tensile strength


## Order No.

| Preliminary Test Force |  |
| :--- | :--- |
| Test Force | Rockwell |
|  | Rockwell |
|  | Superficial |
|  | Brinell |

Force Control
Console/Display Unit
Test Force Selection
Table up/down drive
Load Duration
Maximum Specimen Height
Maximum Specimen Depth
Display Indication Functions

810-202-03A
29.42N (3kgf), 98.07N (10kgf)
588.4N (60kgf), 980.7N (100kgf), 1471N (150kgf)
147.1 N ( 15 kgf ), 294.2 N (30kgf), 441.3 N (45kgf)

1839 N ( 187.5 kgff ) (for use with 2.5 mm ball)
Automatic control (unloading/duration/unloading) with closed loop feed back Touch screen operation with back-lit LCD graphic display By touch screen
Manual (w/Auto-brake mechanism)
0 to 120 sec. ( 1 sec. step)
8.1" ( 205 mm )
5.9" ( 150 mm )

Hardness value, Converted hardness value, Test conditions, OKNG tolerance judgement,statistical processing result Rockwel/Rockwell supericicial hardness testing. Continuous testing. Cylindrical/spherical surface compensation, data offset Hardness conversion (HV, HK, HRABB/C/D/F/
G/15T/3OT/45T/15N/3NN/45N, HS, HB, HBW, tensile strength) $\mathrm{OK} \pm \mathrm{NG}$ tolerance judgement, measured data editing, data memory (max 1024 data)
SPC calculation (No. of data, max/min/mean values, range, upper/ lower limit values, standard deviation, No. of passing/defective) Histogram, $\overline{\mathrm{X}}$-R chart
RS-232C, SPC, Centronics
$9.84^{\prime \prime} \times 26.38^{\prime \prime} \times 23.82^{\prime \prime}(250 \times 670 \times 605 \mathrm{~mm})$

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 810-202-03A | Rockwell Hardness Tester | $\$ 15,000.00$ | $\$ 13,950.00$ |

## Rockwell Hardness Testers



| Model <br> Order No. | HR-210MR <br> $963-220-10 \mathrm{~A}$ | HR-320MS <br> $963-231-10 \mathrm{~A}$ | HR-430-MR <br> $963-240-10 \mathrm{~A}$ | HR-430MS <br> $963-241-10 \mathrm{~A}$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Rockwell | + | + | + | + |  |
| Rockwell Superficial | - | + | - | + |  |
| Light Force Brinell | Optional | Optional | Optional | Optional |  |
| Display Unit | Analog | Digital: Hardness value, Scale display, Timer setting, <br> Conversion, <br> GO/NG judgment, Offset setting |  |  |  |
| Data Output | - | RS-232C <br> SPC (Digimatic) |  |  |  |
| Dial a Weight | - | - | + | + |  |
| Motorized Test Force Control | + | + | + | + |  |
| Automatic Brake/Start | - | - | + | + |  |
| List Price | $\$ 6,100.00$ | $\$ 8,740.00$ | $\$ 9,000.00$ | $\$ 10,000.00$ |  |
| Sale Price | $\$ 4,990.00$ | $\$ 6,990.00$ | $\$ 7,990.00$ | $\$ 8,990.00$ |  |

## Mitutoyo is proud to introduce

 the new 963 Series of Hardness Testers.Four new features packed yet economical Rockwell and Rockwell Superficial Hardness Testers cover a large range of testing applications. These testers meet the current international requirements such as ASTM E18 and are designed for years of accurate results.

## Impact Type Portable Hardness Tester

Rebound type portable hardness tester featuring reproducibility and ease of operation on large parts. It is light weight and can be conveniently carried into the shop or out in the field.


| Model | HH-411 |  |  |
| :---: | :---: | :---: | :---: |
| Order No. | 810-298 |  |  |
| Hardness Range | L-Value (ASTM A956) |  |  |
| Detector | Input device D (carbide ball) |  |  |
| Display | Hardness | Range | Resolution |
|  | HL | 1 -999 HL | 1 HL |
|  | HV | 43-950 HV | 1 HV |
|  | HB | 20-894 HB | 1 HB |
|  | HRC | 19.3-68.2 HRC | 0.1 HRC |
|  | HRB | 13.5-101.7 HRB | 0.1 HRB |
|  | HS | 13.2-99.3 HS | 0.1 HS |
|  | HTN | 499-1996 Mpa | 1 Mpa |
| Functions | Conversions: HL,HV, HB, HRC, HRB, HS, HTN Judgment: OKNG <br> Offsetting <br> Memory: 1,800 data |  |  |
| Output | RS-232C, SPC |  |  |
| Power supply | Alkaline AA Battery 2pcs. |  |  |
| Dimensions | Detector: (Dia. XH) $1.10^{\prime \prime} \times 6.89^{\prime \prime}(28 \times 175 \mathrm{~mm})$ <br> Display: (W x D x H) $2.76^{\prime \prime} \times 4.33^{\prime \prime} \times 1.38^{\prime \prime}(70 \times 110 \times 35 \mathrm{~mm})$ |  |  |
| Mass | Detector: . 26 lbs 20 g ) Display: .44bs (200g) |  |  |

## Stereo Microscopes with Continuous 1X - 4X Magnification

Traditional binocular/Trinocular stereo microscopes for industrial, medical, and classroom applications. It is ideal for electrical small part inspection, assembly, and medical/biological dissection.

## Features

- Continuous 1X - 4X magnification
- The image is always in focus throughout zoom range
- Crisp, erect images with high resolution and excellent stereoscopic effect
- Stereo-tube can be rotated a full $360^{\circ}$, for viewing at any angle
- Bilateral zoom control knob adds convenience and increases operator effi ciency
- Diopter adjustment for both eyepieces
- Binocular Tube Inclination: $45^{\circ}$
- Focusing Range: $1.46^{\prime \prime}$ ( 37 mm )
- Interpupillary Adjustable Range: 2.12" - 2.99" (54mm - 76mm)

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 377-972A | Binocular Stereo Microscope | $\$ 1,150.00$ | $\$ 1,092.00$ |



## Toolmaker's Microscope



The TM-505D/510D is a compact microscope well suited for measuring dimensions and angles of machined metals. It can also be used to check the shape of screws and gears by attaching an optional reticle. Its compact body makes it ideal for use on shopfloors with limited space!

- The eyepiece section of the optical tube incorporates a vernier protractor. Angle measurement is performed easily by turning the protractor to align the cross-hair reticle with the workpiece image.
- Complete selection of interchangeable reticles are available.
- Both the transmitted and reflected illumination intensity can

| Order No. | Description | List Price | Sale Price |
| :--- | :--- | :---: | :---: |
| 176-808A | TM-505 With Mic Heads, 2 <br> X2" Stage | $\$ 5,490.00$ | $\$ 4,941.00$ |
| 176-809A | TM-510 With Mic Heads, 4 <br> X2" Stage | $\$ 7,320.00$ | $\$ 6,588.00$ |
| 937387 | $40^{\prime \prime}$ Mic Head Cable | $\$ 50.85$ | $\$ 48.30$ |
| 965013 | $80^{\prime \prime}$ Mic Head Cable | $\$ 60.10$ | $\$ 57.10$ |
| 64AAB214 | LED Variable Ring Light | $\$ 190.00$ | $\$ 180.50$ | be adjusted to obtain the optimal illumination intensity for the workpiece.

- Two XY stages with different travel ranges, $2^{\prime \prime} \times 2^{\prime \prime}(50 \mathrm{~mm} \times 50 \mathrm{~mm})$ and $4^{\prime \prime} \times 2^{\prime \prime}(100 \mathrm{~mm} \times 50 \mathrm{~mm})$, are available.


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## GO FOR EOLD!



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Your ultra-precise part inspection process demands the best. But the cost of ownership issues drives a strong bottom line focus as well. Our Gold Care Program lets you achieve both. Simply it's the packaging of our industry leading Coordinate Measuring Machines and Vision Measuring Systems paired with productivity enhancing products and services. Packages are valued at up to \$20,000 and bundled at our base machine price. To learn more visit MITUTOY0.COM/GETGOLD or call 888-MITUTOYO.

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- MeasurLink ${ }^{\ominus}$ Pro Edition Quality Data Management Software*
- MITUTOYO Eco-Fix ${ }^{\circledR}$ or Opti-Fix ${ }^{\circledR}$ Starter Fixture Kit
- MITUTOYO Starter Stylus Kit (Included with Touch Probe Machines)
- MITUTOYO Fixture Builder Software**

Qualifying machines include CRYSTA APEX S 500/700/900/1200, CRYSTA-PLUS MANUAL 500/700 QV-APEX 302/404/606 and QV-APEX 302TP/404TP/606TP

* Not included with the CRYSTA-PLUS MANUAL 500/700
* CRYSTA-APEX S 500/700/900/1200

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