

TVM



TVM

INTRODUCTION

The TVM instruments are perfect for height measurements and scribing work and reliable in all kinds of workshop conditions. The result of an unique, compact design of the instrument is great mobility and extreme stability.

Because of its advanced measuring system, the self-contained working time of the TVM is one year. Therefore it can be used for multiple applications in the workshop area. The simplicity of manipulation allows constant change of the user without any time-consuming training.

The success of the TVM among competitive gauges is outstanding. More than 14'000 instruments are in use worldwide.

Three models are available: with application range from 300 to 1000 mm. A large range of accessories for all kinds of measuring applications is available.

ROBUST AND COMPACT CONSTRUCTION

PERFECT FOR USE IN PRODUCTION AREA

ACCURATE AND RELIABLE MEASUREMENTS






USER FRIENDLY

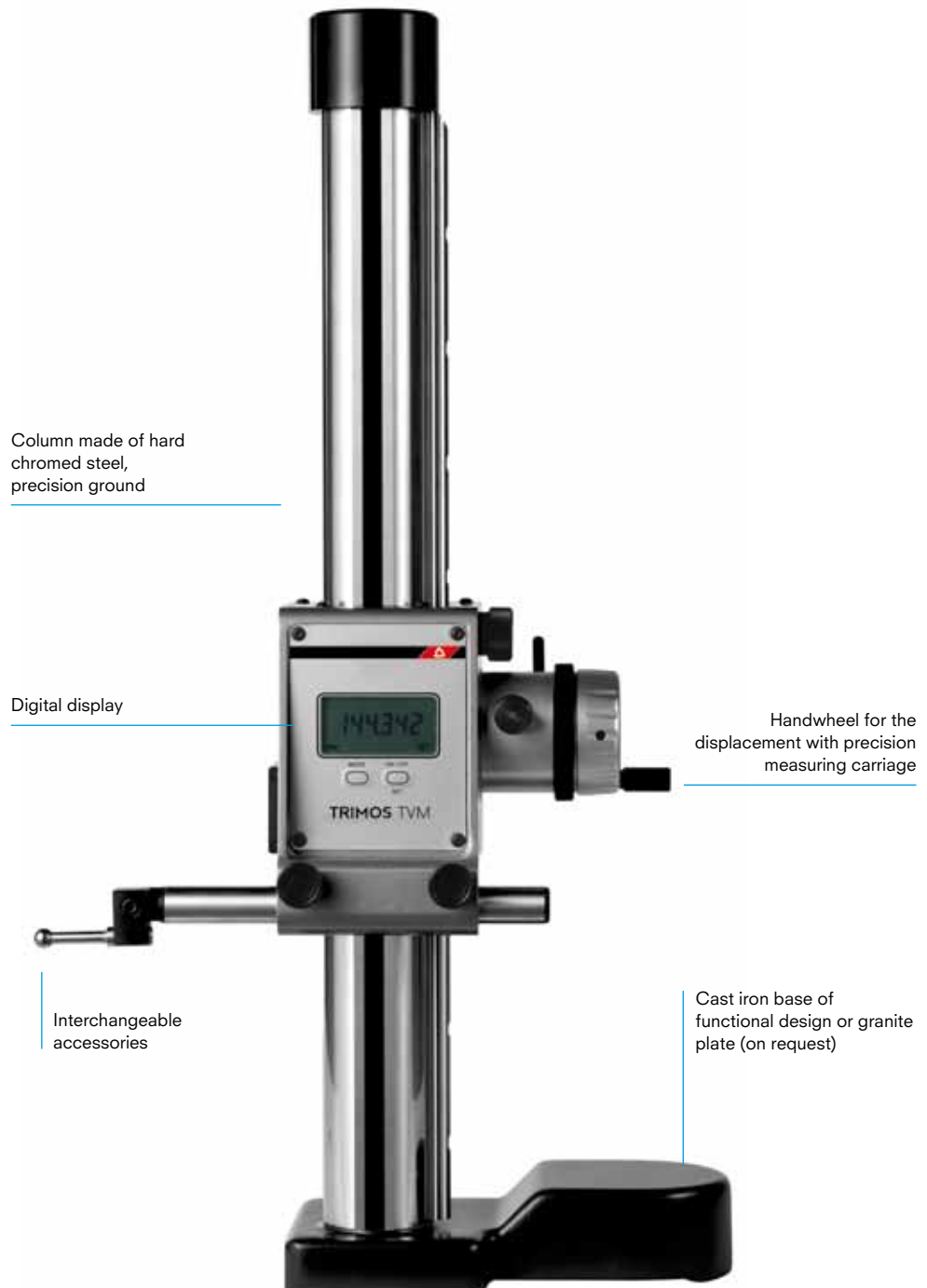
OPTO-RS232 DATA OUTPUT

RECHARGEABLE BATTERY PACK

TWO MODELS: CAST IRON BASE OR A GRANITE BASE

DESCRIPTION

-  Surfaces
-  2 references
-  Internal/external diameters
-  Tolerances
-  Min/Max/Delta



TVM

DISPLAY / SOFTWARE

The clearly defined functions of the display unit allow to collect all height measuring values.

MIN/MAX FUNCTION INDICATOR

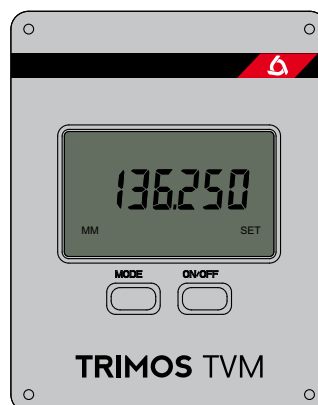
2 REFERENCES

END OF BATTERY LIFE WARNING INDICATION

PRESET SELECTION

MEASURING UNIT (MM/IN) INDICATOR

TOLERANCE MODE INDICATOR



sylvac system

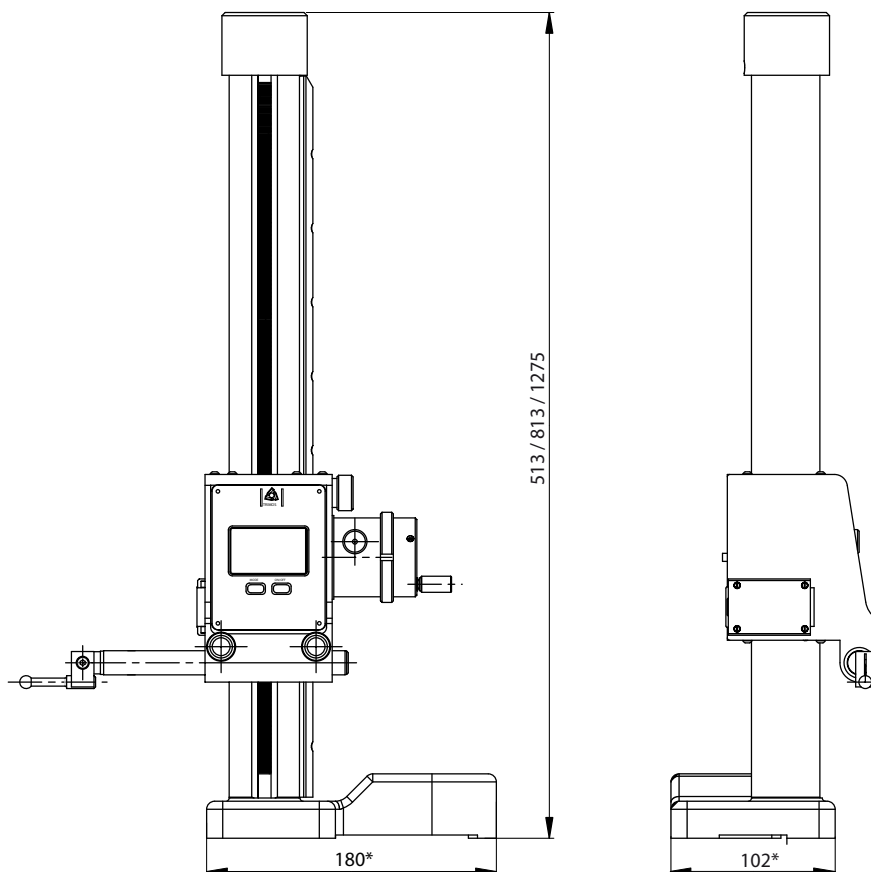


TECHNICAL SPECIFICATIONS

TVM		302	602	1002
Measuring range	mm (in)	320 (12)	620 (24)	1020 (40)
Max. permissible errors ¹⁾	mm	0.02	0.03	0.04
Repeatability (2s) ¹⁾	mm		0.005	
Frontal squareness deviation	mm	0.02	0.03	0.03
Resolutions	mm (in)	0.01/0.001 (.0005/ .00005)		
Measuring force	N		3	
Max. manual carriage displacement speed	mm/s		1500	
Autonomy	h		2000	
Data output			Opto RS232	
Operational temperature	°C		+10 ÷ +40	
Temperature of storage	°C		-10 ÷ +40	
Weight (cast iron base)	kg	6	10	24
Weight (granite base)	kg	14	18	

¹⁾ Values valid with measuring insert and holder (TVM1/1.1/2) at temperature of 20 ± 0.5°C and relative humidity of 50 ± 5%.

DIAGRAM



STANDARD INSTRUMENT

The TVM instruments are supplied as follows:

TVM 300- 600	TVM1000
Instrument according to specifications	Instrument according to specifications
Measuring insert and holder (TVM1 / 1.1 / 2)	Measuring insert and holder (TVA1)
Lithium battery, 3 V (BAT-TVM.OPTO)	Lithium battery, 3 V (BAT-TVM.OPTO)
Protection cover (TVM.HO300/600)	User's manual (750 50 0018 03)
User's manual (750 50 0018 03)	Test certificate
Test certificate	

CODE NUMBERS

Cast iron base	Granit base	
TVM302 700 102 10 11	TVM302G 700 102 10 14	Measuring range 300 mm
TVM602 700 102 20 11	TVM602G 700 102 20 14	Measuring range 600 mm
TVM1002 700 102 30 11		Measuring range 1000 mm

* TVM 302 and 602 only

TVM

APPLICATIONS



Height and depth measurements
(TVM1/1.1/2)



Diameter measurements (TVM4)



Measuring of centerline distances
(TVM5)



Scribing (TVM1/TVM3)



Ease of handling

V/V Plus



V/V Plus

INTRODUCTION

Talking about the V and V Plus series means looking at a height measuring instrument of universal use.

The new ergonomic and compact design has been well accepted from the industry worldwide. Ease of use and quick performance of all measuring tasks are given by the clearly defined function keys.

The updated measuring system combined with a powerful display unit guarantees high precision and maintains an incomparable self-containment of use in any manufacturing conditions.

The adjustable measuring force of V Plus models between 0.7 N and 1.6 N (0.3 N on request) allows the performance of measurements on components of delicate material.

The result of a modular instrument concept is a complete series with application ranges from 300 mm to 1235 mm at very competitive prices.

A wide range of accessories makes it possible to solve all required measuring tasks.

PERFECT FOR USE IN THE WORKSHOP AREA

EXTREMELY EASY TO OPERATE

AUTONOMOUS USE WITH RECHARGEABLE BATTERY PACK

AIR CUSHION STANDARD ON C VERSION (V PLUS)

CLEAR DEFINITION OF ALL MEASURING FUNCTIONS








EXTREMELY LARGE DISPLAY OF VALUES

ACCEPTANCE OF A MEASURED VALUE BY ACOUSTIC SIGNAL

DIRECT RS232C DATA OUTPUT (BI-DIRECTIONAL)

ADJUSTABLE MEASURING FORCE

DESCRIPTION

-  Surfaces
-  Internal/external diameters
-  Centerline distances
-  Min/Max/Delta
-  2 references
-  Squareness measurements
-  Calculation mode



V/V Plus

DISPLA / SOFTWARE

The clearly defined functions of the display unit allow quick performance of all required height measurements.

SURFACE AND CENTERLINE DISTANCE MEASUREMENTS

ZERO SETTING OF THE DISPLAY OR PRESET VALUE SETTING

DATA TRANSFER (RS 232)

SELECTION OF MEASURING UNIT MM OR INCH

SELECTOR KEY TO OBTAIN A MIN/MAX/DELTA VALUE

MEASURING USING TWO REFERENCES

ADJUSTMENT OF THE ACOUSTIC SIGNAL



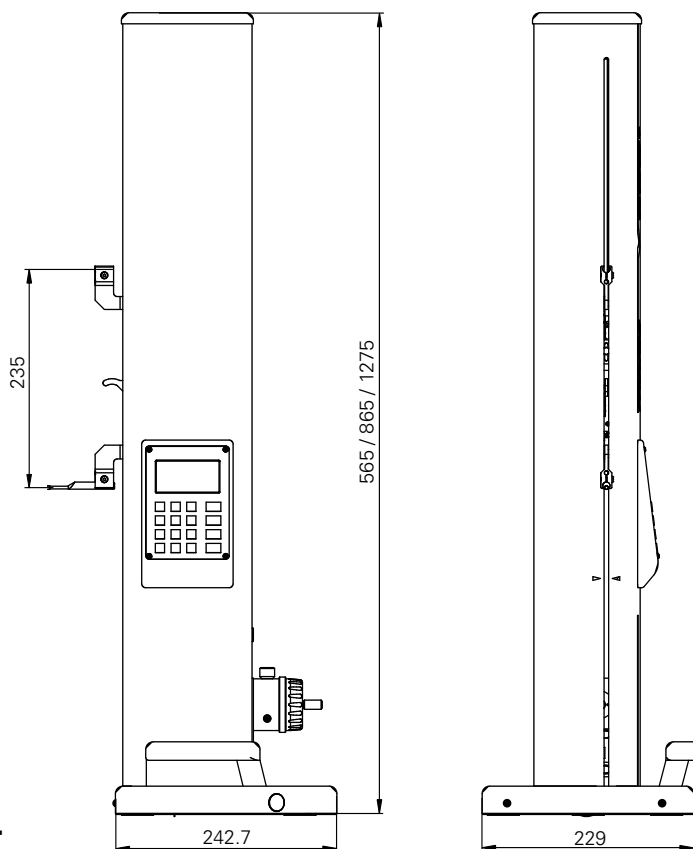
TECHNICAL SPECIFICATIONS

V		300	600
Measuring range	mm (in)	300 (12)	600 (24)
Application range	mm (in)	535 (21)	835 (32)
Max. permissible errors ¹⁾	µm	8	10
Repeatability (2s) ¹⁾	µm	2 (Ø:4)	
Frontal squareness deviation	µm	10	15
Resolutions	mm (in)	0.01/0.001 (.0001/.00005)	
Measuring force	N	1	
Max. manual carriage displacement speed	mm/s	1500	
Autonomy	h	100	
Data output		RS232	
Operational temperature	°C	+10 ÷ +40	
Temperature of storage	°C	-10 ÷ +40	
Weight	kg	10	12

V Plus		300	600	1000
Measuring range	mm(in)	300 (12)	600 (24)	1000 (40)
Application range	mm(in)	535 (21)	835 (32)	1235 (48)
Max. permissible errors ¹⁾	µm	2.5 + L (mm) / 300		
Repeatability (2s) ¹⁾	µm	2		
Frontal squareness deviation	µm	5	8	12
Resolutions	mm(in)	0.01/0.001 (.0001/.00005)		
Measuring force (adjustable)	N	0.7 ÷ 1.6 (V305: 0.3 ÷ 1.2)		
Max. manual carriage displacement speed	mm/s	1500		
Autonomy (without/with air cushion)	h	100/30		
Data output		RS232		
Operational temperature	°C	+10 ÷ +40		
Temperature of storage	°C	-10 ÷ +40		
Weight	kg	10	12	15

¹⁾ Values valid with standard ball probe (TA-MI-101) at temperature of 20 ± 0.5°C and relative humidity of 50 ± 5%.

SCHEMA



STANDARD INSTRUMENT

The V instruments are supplied as follows:

Instrument according to specifications	User's manual (750 50 0004 00)
Charging unit (TA-EL-131)	Test certificate
Measuring insert with ruby ball Ø 4 mm (TA-MI-101)	Hex screw driver 2 mm (TA-TO-002)
Setting gauge (TA-MG-103)	Hex screw wrench 2.5 mm (V-50.15)

The V Plus instruments are supplied as follows:

Instrument according to specifications	User's manual (750 50 0004 00)
Charging unit (TA-EL-131)	Test certificate
Measuring insert with ruby ball Ø 4 mm (TA-MI-101)	Hex screw driver 2 mm (TA-TO-002)
Setting gauge (TA-MG-103)	Hex screw wrench 2.5 mm (V-50.15)
Protection cover (V.HO300/V.HO600/V.HO1000)	

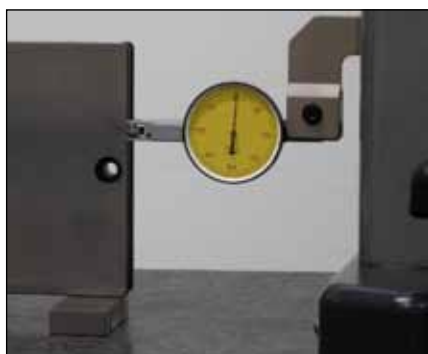
CODE NUMBERS

V	V Plus		
	Without air cushion	With air cushion	
VL300 700 105 10 41	V304 700 105 10 01	V304C 700 105 10 02	Measuring range 300 mm
	V305 700 105 10 10	V305C 700 105 10 11	Measuring range 300 mm ¹⁾
VL600 700 105 20 41	V604 700 105 20 01	V604C 700 105 20 02	Measuring range 600 mm
		V1004C 700 105 30 02	Measuring range 1000 mm

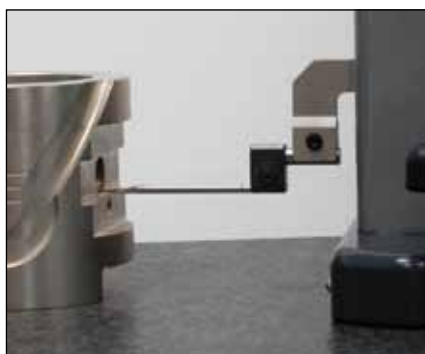
¹⁾ The instruments V305 and V305C are with low measuring force (0.3-1.2 N)

V/V Plus

APPLICATIONS



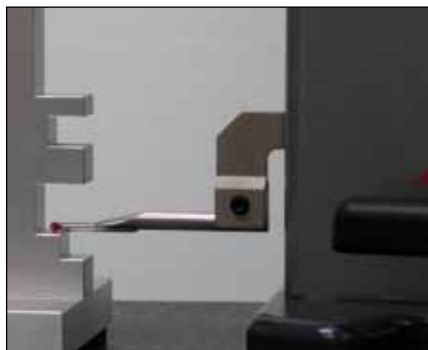
Checking of squareness deviation



Tiny Surface, diameter and centerline distance measurements (V-5/V50.9)



Depth measurement (TA-IH-109/V-50.5/V-50.4)



Checking of surface distances (TA-MI-101)



Thickness measurements (TA-MI-101)



Min/max measurements (TA-MI-101)

VECTRA-TOUCH



VECTRA-TOUCH

INTRODUCTION

The "Vectra-Touch" height measuring instruments are of universal use in any production field. They are the result of 40 years of experience in development and manufacturing. This experience makes it possible to introduce a product that combines ergonomic design with new technology. Its reliable concept is a reference for durability. Ease of use and quick performance of all required measuring tasks allow unlimited applications in any manufacturing area.

The distinctive design of the Vectra-Touch, as well as its exceptional functionalities, offer the user an ease of use unequalled on the market. The display unit is identical for all models and gathers all assets for a rational use in the workshop. A limited number of keys (19) makes the instrument accessible to any user, whatever his level of training. The robust colour touch screen offers great ease of use. Only essential information will be provided to the user. A graphic assistance guides the execution of all measurements.

Ease of use has been an absolute priority in the requirements, thus resulting in functions, usually considered as complex, such as 2D, programming, statistics, becoming child's play.

CLEAR DISPLAY WITH LARGE DIGITS

GRAPHIC HELP FOR MEASURING

PRINTING OF REPORTS ON USB PRINTER

BACKUP ON EXTERNAL SUPPORT (USB KEY)




















MEASURING RANGE FROM 300 MM TO 2000 MM

AVAILABLE IN MANUAL OR MOTORIZED VERSION

WORKING ON ACCUMULATOR

LARGE RANGE OF ACCESSORIES

DESCRIPTION

-  Surfaces
-  Internal/external diameters
-  Centerline distances
-  Graphic help "EasyScan"
-  Min/Max/Delta
-  9 references
-  Squareness measurements
-  Angle measurements
-  Calculation mode
-  Tolerances
-  2D measuring mode
-  Measurement sequences
-  Statistical analysis
-  Temperature compensation
-  Online help
-  USB ports
-  RS232 ports
-  Wireless communication
-  Automatic displacement



VECTRA-TOUCH

DISPLAY / SOFTWARE

The colour display facilitates the reading of all measuring parameters. The functions are easily and directly accessible. The display unit is identical for all models.

- VERY SIMPLE GRAPHIC INTERFACE

- DATE AND TIME DISPLAY

- DISPLAY OF ENVIRONMENTAL TEMPERATURE

- ACOUSTIC AND GRAPHIC PROBING INDICATOR

- GRAPHIC DISPLAY OF SQUARENESS

- COLOR TOUCH SCREEN

- MEASURING IN 2D MODE

- PROGRAMMING OF MEASURING SEQUENCES

- STATISTICAL ANALYSIS

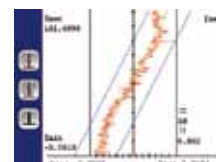
- TEMPERATURE COMPENSATION FEATURE

- INTEGRATED ON LINE HELP

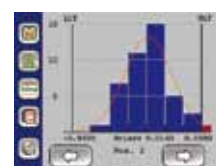
- BUFFER WITH 999 VALUES



Touch-screen with intuitive interface



Graphic display of squareness



Statistical analysis of measurement results



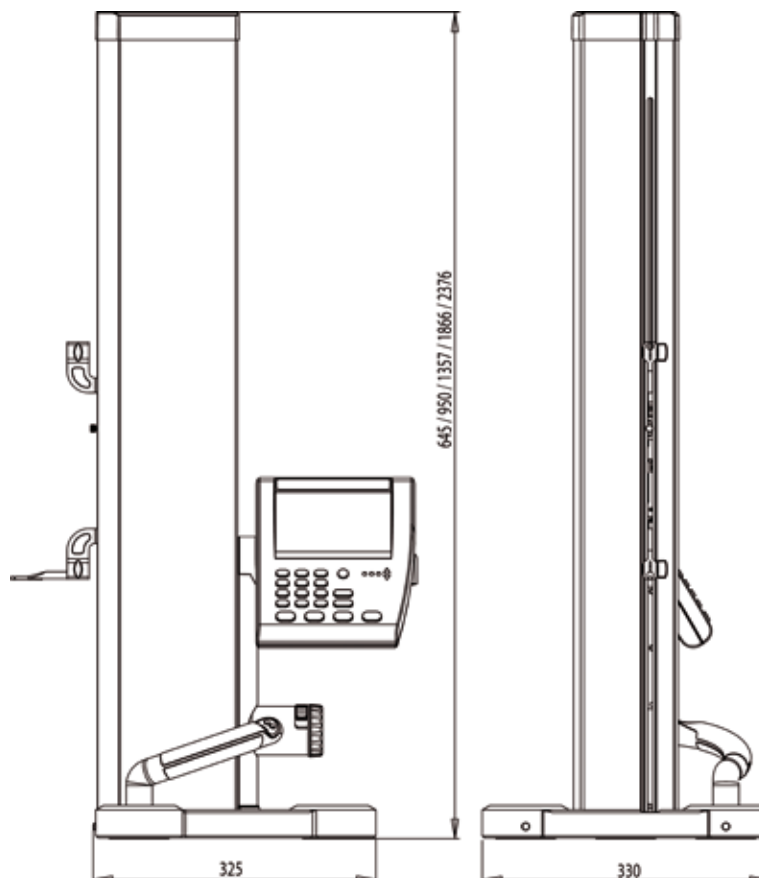
Graphic help for each function

TECHNICAL SPECIFICATIONS

Vectra-Touch		300	600	1000	1500	2000
Measuring range	mm(in)	305 (12)	610 (24)	1016 (40)	1524 (60)	2034 (80)
With second probe holder	mm(in)	567 (22)	872 (34)	1278 (50)	1786 (70)	2296 (90)
Max. permissible errors ¹⁾	µm	2+ L(mm)/400			2.5 + L(mm)/300	
Repeatability (2s) ¹⁾	µm	1 (Ø:2)				
Resolutions	mm(in)	0.01/0.001/0.0001 (.001/.0001/.00001)				
Manual carriage displacement speed	mm/s	1000				
Motorized carriage displacement speed	mm/s	150				
Measuring force (adjustable)	N	0.5 ÷ 1.8				
Frontal squareness deviation	µm	4	6	10	15	25
Autonomy	h	> 8				
Data output		2 x RS232 C and 2 x USB (A et B)				
Operational temperature	°C	+10 ÷ +40				
Temperature of storage	°C	-10 ÷ +40				
Weight	kg	22	25	29	39	44

¹⁾ Values valid with standard ball probe (TA-MI-101) at temperature of 20 ± 0.5°C and relative humidity of 50 ± 5 %.

SCHEMA



STANDARD INSTRUMENT

The Vectra-Touch instruments are supplied as follows:

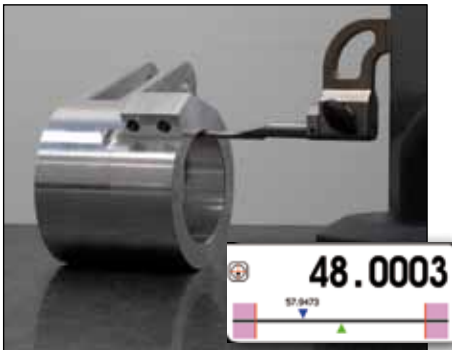
Instrument according to specifications	User's manual (750 50 0002 03)
Charging unit (TA-EL-130)	Test certificate
Measuring insert with ruby ball Ø 4 mm (TA-MI-101)	Hex screw driver 2 mm (TA-TO-002)
Setting gauge (TA-MG-101)	Hex screw wrench 5 mm (TA-TO-001)
Protection cover (TA-TO-109/110/111/112/113)	Touch screen pen (LABC-30.3)

CODE NUMBERS

Manual	Motorized	
VT300MA 700 107 10 01	VT300MO 700 107 10 02	Measuring range 300 mm
VT600MA 700 107 20 01	VT600MO 700 107 20 02	Measuring range 600 mm
VT1000MA 700 107 30 01	VT1000MO 700 107 30 02	Measuring range 1000 mm
VT1500MA 700 107 40 01		Measuring range 1500 mm
VT2000MA 700 107 50 01		Measuring range 2000 mm

VECTRA-TOUCH

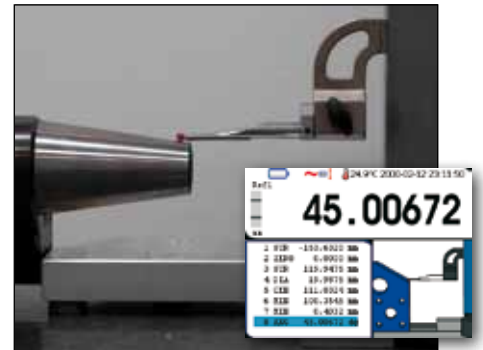
APPLICATIONS



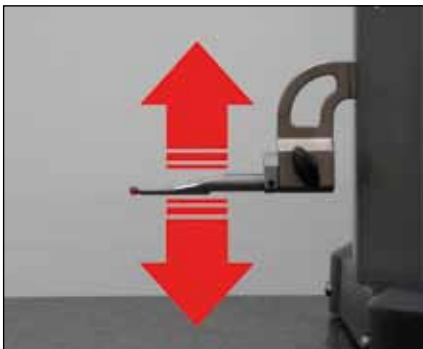
Diameter measurement with graphic help "EasyScan" (TA-MI-101/TA-AD-101)



Squariness mechanically adjusted on all instruments



Measurement of angles and cones with graphic help display (TA-MI-101/TA-AD-101)



Measurement with automatic displacement in programming mode



Checking of squariness using an additional electronic probe and colour print-out of the curve (TA-MS-101)



Measurement using temperature compensation system with optional external sensor (TA-EL-120)



Storage of all data to an external memory, e.g. USB Memory Stick (TA-EL-140)



Wireless communication by Bluetooth or Wi-Fi (optional) (TA-EL-123/4)



Standard probes up to 320 mm. (here optional 550 mm)

MESTRA + TOUCH



MESTRA+TOUCH

INTRODUCTION

The "Mestra" height measuring instruments are classified among the most accurate ones worldwide. This new instrument line is the result of 40 years of experience, which makes it possible to offer a product having advanced technologies combined with ergonomic design.

The result of the well designed instrument concept incorporating an entire new measuring system is an optimum accuracy level. The extreme ease of use allows unrestricted application in production areas as well as in measuring laboratory environment.

Two specific models are available, "Mestra" and "Mestra-Touch". The difference between these two models is the layout of the display unit as well as the available measuring functions. The "Mestra" has a display unit incorporating all basic functions such as checking of heights, depths, diameters and centerline distances, squareness deviation, angles and tolerance limits indication. In addition the "Mestra-Touch" offers a colour touch screen and functions such as the 2-coordinate system, programming of measuring sequences, statistical analysis of memorized values and display of environmental temperature.

EXTREME ACCURACY LEVEL

GRAPHIC HELP FOR MEASURING

PRINTING OF REPORTS ON USB PRINTER

BACKUP ON EXTERNAL SUPPORT (USB KEY)

MEASURING RANGE FROM 300 MM TO 1000 MM















AVAILABLE IN MANUAL OR MOTORIZED VERSION

WORKING ON ACCUMULATOR






LARGE RANGE OF ACCESSORIES

DESCRIPTION

MESTRA + MESTRA-TOUCH

-  Surfaces
-  Internal/external diameters
-  Centerline distances
-  Graphic help "EasyScan"
-  Min/Max/Delta
-  9 references
-  Squareness measurements
-  Angle measurements
-  Calculation mode
-  Tolerances
-  USB ports
-  RS232 ports
-  Wireless communication
-  Automatic displacement

MESTRA-TOUCH

-  2D measuring mode
-  Measurement sequences
-  Statistical analysis
-  Temperature compensation
-  Online help



MESTRA + TOUCH

DISPLAY / SOFTWARE

The colour display facilitates the reading of all measuring parameters. The functions are easily and directly accessible.

INTERACTIVE HELP

DATE AND TIME DISPLAY

ACOUSTIC AND GRAPHIC PROBING INDICATOR

MEASURING OF VALUES WITH TOLERANCE INDICATION

GRAPHIC DISPLAY OF SQUARENESS

TOUCH SCREEN (MESTRA-TOUCH)

MEASURING IN 2D MODE (MESTRA-TOUCH)

MEASURING SEQUENCES (MESTRA-TOUCH)

STATISTICAL ANALYSIS (MESTRA-TOUCH)

TEMPERATURE COMPENSATION FEATURE
(MESTRA-TOUCH)

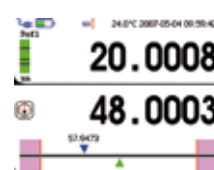
INTEGRATED ON LINE HELP (MESTRA-TOUCH)



Touch-screen with intuitive interface
(Mestra-Touch)



Easy identification of
each measuring function



Graphical help for
diameter measurements



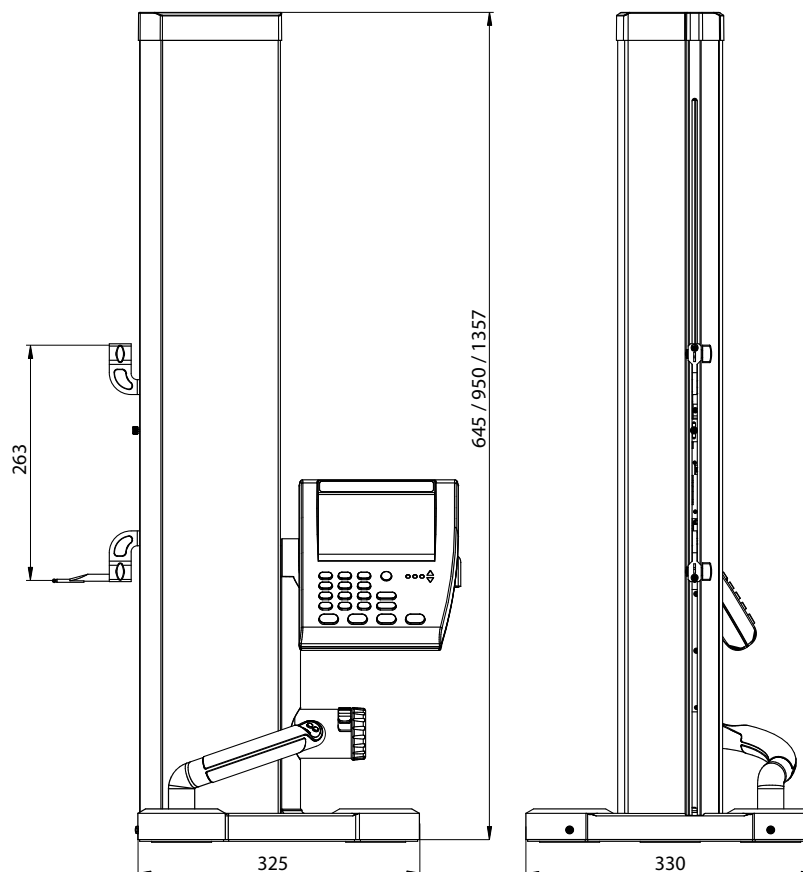
Clear indication of part
conformity

TECHNICAL SPECIFICATIONS

Mestra/Mestra-Touch		300	600	1000
Measuring range	mm (in)	305 (12)	610 (24)	1016 (40)
With second probe holder	mm (in)	567 (22)	872 (34)	1278 (50)
Max. permissible errors ¹⁾	µm	1.2+ L(mm)/1000		
Repeatability (2s) ¹⁾	µm	0.5 (Ø:1)		
Resolutions	mm (in)	0.01/0.001/0.0001 (.001/.0001/.00001)		
Manual carriage displacement speed	mm/s	1000		
Motorized carriage displacement speed	mm/s	150		
Measuring force (adjustable)	N	0.5 ÷ 1.8		
Frontal squareness deviation	µm	4	6	10
Autonomy	h	> 8		
Data output		2 x RS232 C and 2 x USB (A et B)		
Operational temperature	°C	+10 ÷ +40		
Temperature of storage	°C	-10 ÷ +40		
Weight	kg	22	25	29

¹⁾ Values valid with ball probe TA-MI-119 at temperature of 20 ± 0.5°C and relative humidity of 50 ± 5 %.

SCHEMA



STANDARD INSTRUMENT

The Maestra and Maestra-Touch instruments are supplied as follows:

Instrument according to specifications	User's manual (750 50 0002 03)
Charging unit (TA-EL-130)	Test certificate
Measuring insert with ruby ball Ø 5 mm (TA-MI-119)	Hex screw driver 2 mm (TA-TO-002)
Setting gauge (TA-MG-101)	Hex screw wrench 5 mm (TA-TO-001)
Protection cover (TA-TO-109/110/111)	Touch screen pen (LABC-30.3)

CODE NUMBERS

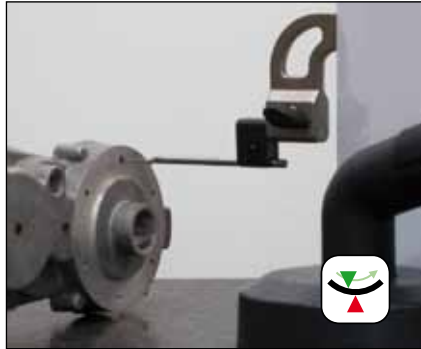
Mestra		Mestra-Touch		
Manual	Motorized	Manual	Motorized	
M300MA 700 107 10 03	M300MO 700 107 10 04	MT300MA 700 107 10 05	MT300MO 700 107 10 06	Measuring range 300 mm
M600MA 700 107 20 03	M600MO 700 107 20 04	MT600MA 700 107 20 05	MT600MO 700 107 20 06	Measuring range 600 mm
M1000MA 700 107 30 03	M1000MO 700 107 30 04	MT1000MA 700 107 30 05	MT1000MO 700 107 30 06	Measuring range 1000 mm

MESTRA + TOUCH

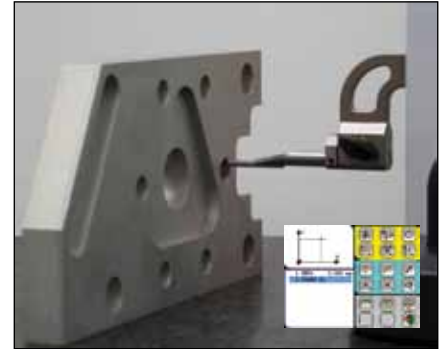
APPLICATIONS



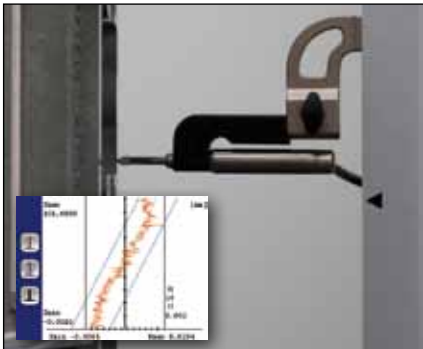
Height measurement of a small board (TA-IH-109/V-50.5/TA-MI-118)



Checking of a small diameter using the adequate measuring insert (V-5/V-50.9)



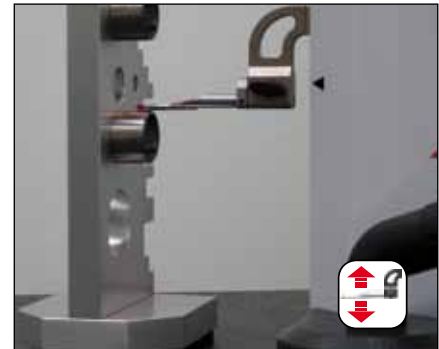
2-coordinate measurement with standard graphic help (TA-MI-101/TA-AD-101)



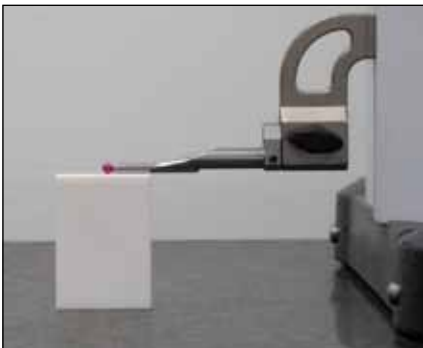
Checking of squareness deviation using an additional electronic probe and colour print-out of the curve (TA-MS-101)



Measurement of a groove using a 90° angled measuring insert holder and an L-shaped insert (TA-IH-105/V.50.5/V-50.3)



Automatic measurement of an external diameter performed with "TRIMOS® NC movement" (TA-MI-101/TA-AD-101)



The complete digital measuring system offers an extremely high accuracy (TA-MI-101/TA-AD-101)



An USB data output allows the storage of all data on an USB Memory Stick as well as the printing of protocols (TA-EL-140)



Wireless communication by Bluetooth or Wi-Fi (optional) (TA-EL-123/4)