

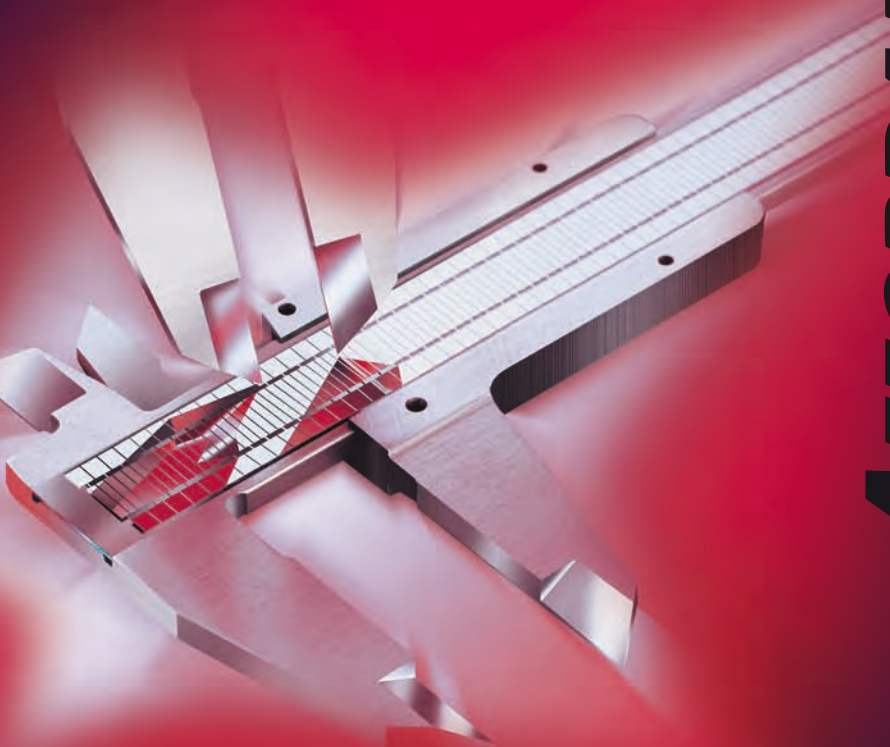
TECNIMETAL



MEASURING

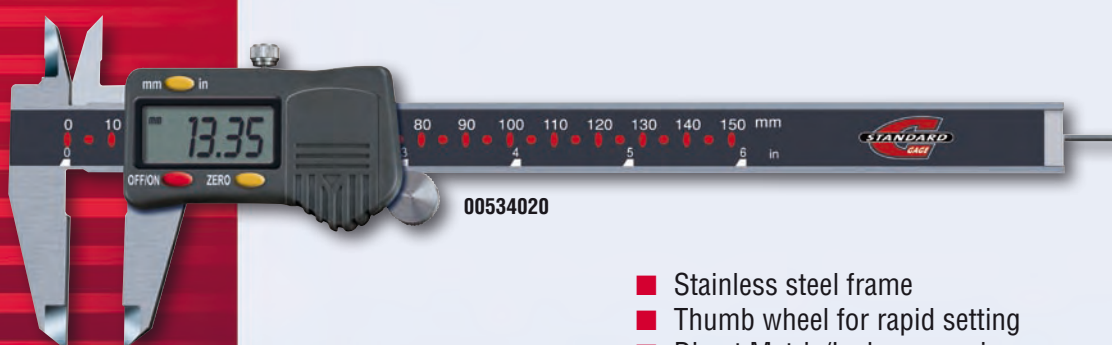
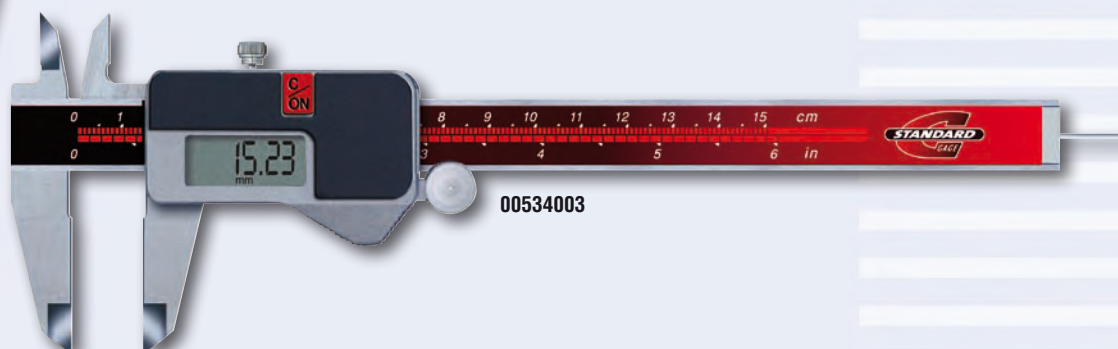
EFFECTIVE

AFFORDABLE



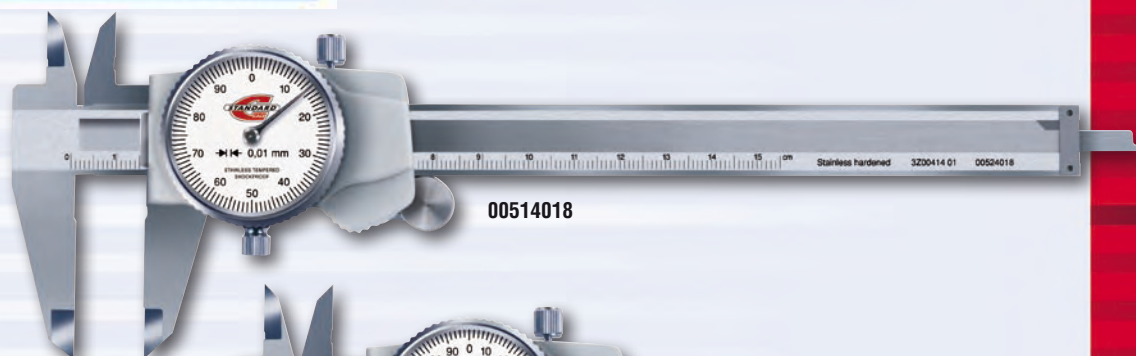
INSTRUMENTS

HEXAGON METROLOGY

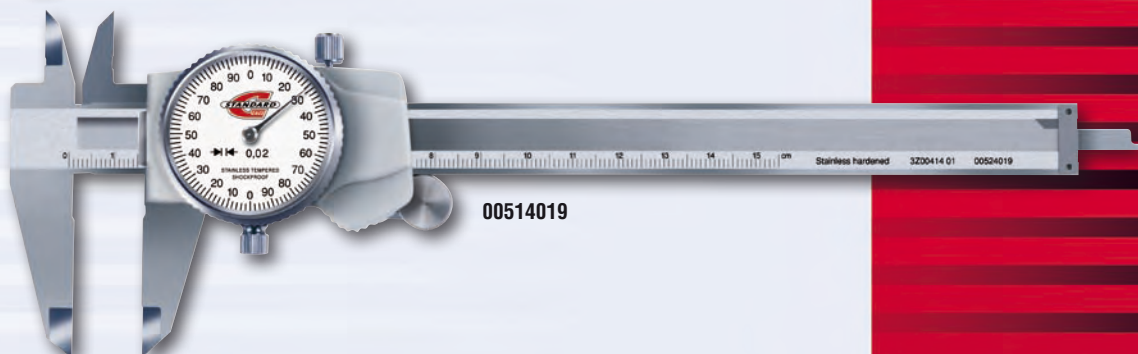


- Stainless steel frame
- Thumb wheel for rapid setting
- Direct Metric/Inch conversion
- Accuracy to 0,02 mm (150 mm models), 0,04 mm (200 and 300 mm models)
- Resolution to 0,01 mm/0.0005 in
- Large easy-to-read LCD display
- Include inspection report
- Supplied with molded case

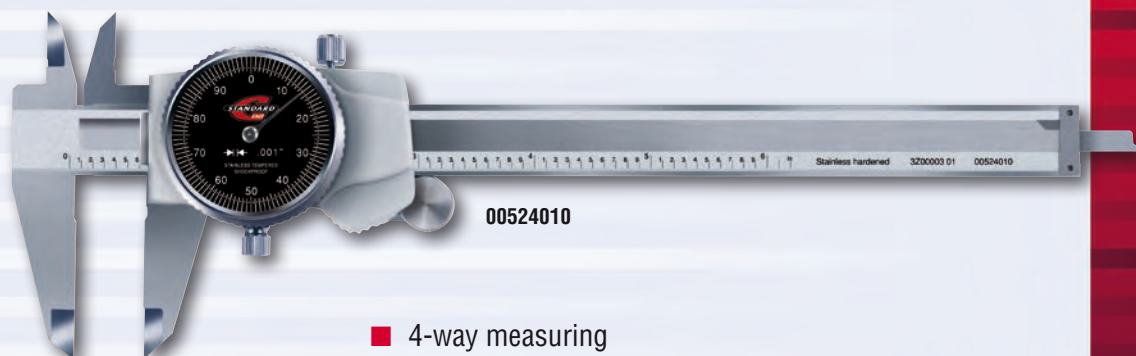
Order No.	Range		Jaw Length mm	Thumb wheel
	mm	in		
00534002	0 ÷ 150	0 ÷ 6	40	—
00534003	0 ÷ 150	0 ÷ 6	40	✓
00534004	0 ÷ 200	0 ÷ 8	50	✓
00534005	0 ÷ 300	0 ÷ 12	60	✓
Value model				
00534020	0 ÷ 150	0 ÷ 6	40	✓



00514018



00514019

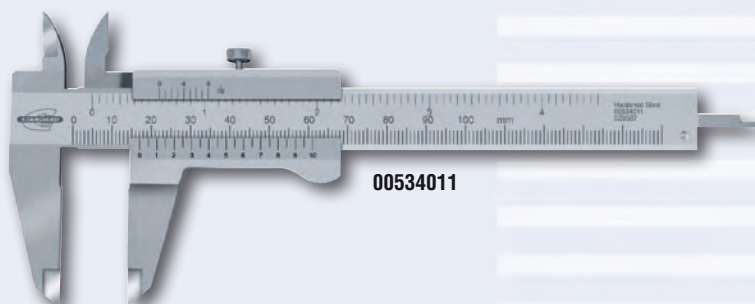


00524010

- 4-way measuring
- Solid stainless steel construction
- Silky smooth movement throughout the entire range
- Include inspection report
- Supplied in a shop-hardened case

Order No.	Range	Reading	Range per Rev	Jaw Length	Thumb-wheel	Dial Face
Metric Models						
00514018	0 ÷ 150	0,01	1	40	—	White
00514019	0 ÷ 150	0,02	2	40	—	White
00514020	0 ÷ 200	0,02	2	50	✓	White
00514021	0 ÷ 300	0,02	2	60	✓	White
Inch Models						
00524010	0 ÷ 6	0.001	0.100	1.6	✓	Black
00524011	0 ÷ 6	0.001	0.100	1.6	✓	White
00524012	0 ÷ 8	0.001	0.100	2	✓	White
00524013	0 ÷ 12	0.001	0.100	2.4	✓	White

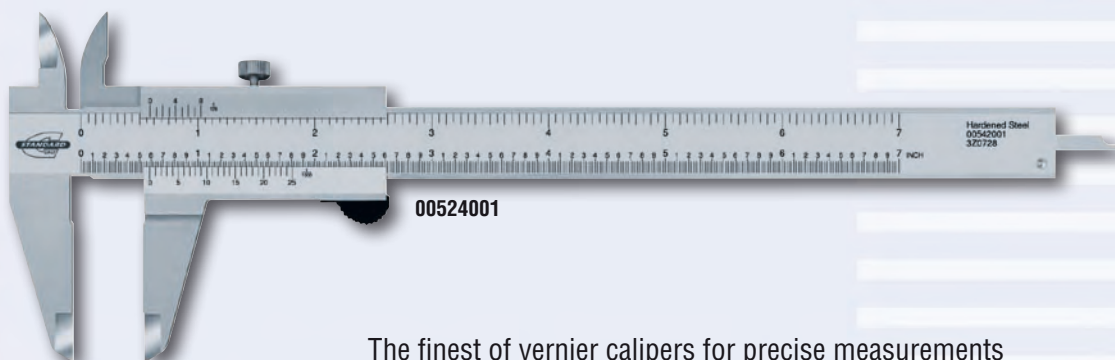
VERNIER PRECISION CALIPERS



00534011



00534012

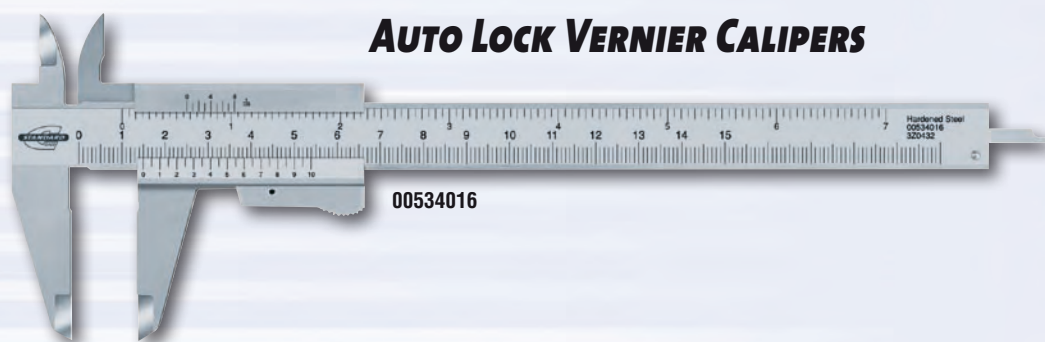


00524001

The finest of vernier calipers for precise measurements

- Made of stainless steel
- Satin-chrome finished scale and vernier
- Delivered with inspection report

Order No.	Range		Vernier Reading		Jaw Length
	Lower Scale	Upper Scale	Lower Scale	Upper Scale	
Metric Models	mm		mm		mm
00514010	0 ÷ 150		0,02		40
00514011	0 ÷ 150		0,05		40
00514012	0 ÷ 200		0,02		50
00514013	0 ÷ 200		0,05		50
00514014	0 ÷ 300		0,02		60
00514015	0 ÷ 300		0,05		60
Metric/Inch Models	mm	in	mm	in	mm
00534011	0 ÷ 100	0 ÷ 4	0,05	1/128	30
00534012	0 ÷ 150	0 ÷ 6	0,02	0.001	40
00534013	0 ÷ 150	0 ÷ 6	0,05	1/128	40
00534014	0 ÷ 200	0 ÷ 8	0,02	0.001	50
00534015	0 ÷ 300	0 ÷ 12	0,02	0.001	60
Inch Models	in	in	in	in	in
00524001	0 ÷ 6	0 ÷ 6	0.001	1/128	1.6
00524002	0 ÷ 8	0 ÷ 8	0.001	1/128	1.6



AUTO LOCK VERNIER CALIPERS

TECNIMETAL

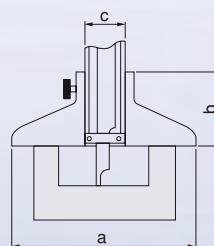
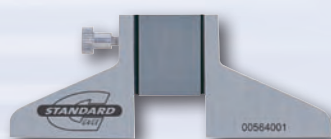
Order No.	Range		Vernier Reading		Jaw Length mm
	Lower Scale mm	Upper Scale in	Lower Scale mm	Upper Scale in	
00514016	0 ÷ 150		0,02		40
00514017	0 ÷ 150		0,05		40
00534016	0 ÷ 150	0 ÷ 6	0,05	1/128	40

AUTO LOCK AND PARALLAX FREE VERNIER CALIPERS



Order No.	Range		Vernier Reading		Jaw Length mm
	Lower Scale mm	Upper Scale in	Lower Scale mm	Upper Scale in	
00534017	0 ÷ 150	0 ÷ 6	0,02	0.001	40
00534018	0 ÷ 150	0 ÷ 6	0,05	1/128	40

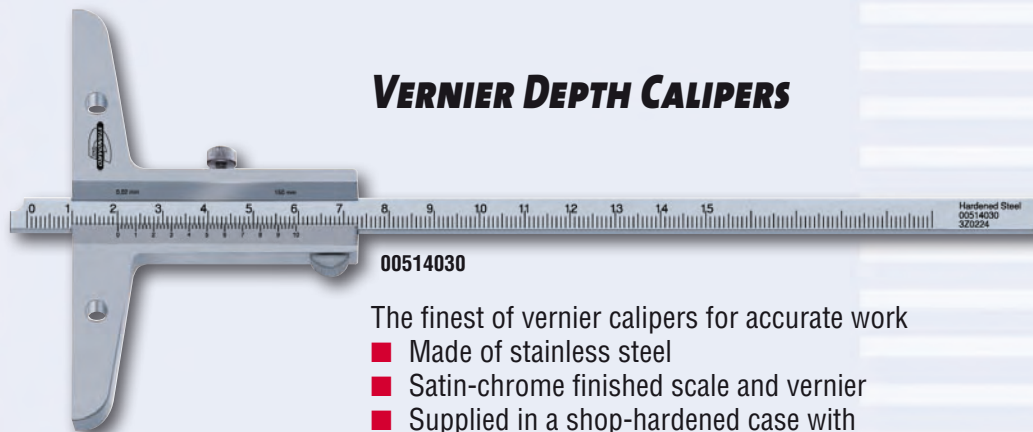
DEPTH MEASURING BASE FOR 150 MM CALIPERS



Order No.	a (mm)	b (mm)	c (mm)
00564001	76,2	30	16,2

CALIPERS

VERNIER DEPTH CALIPERS



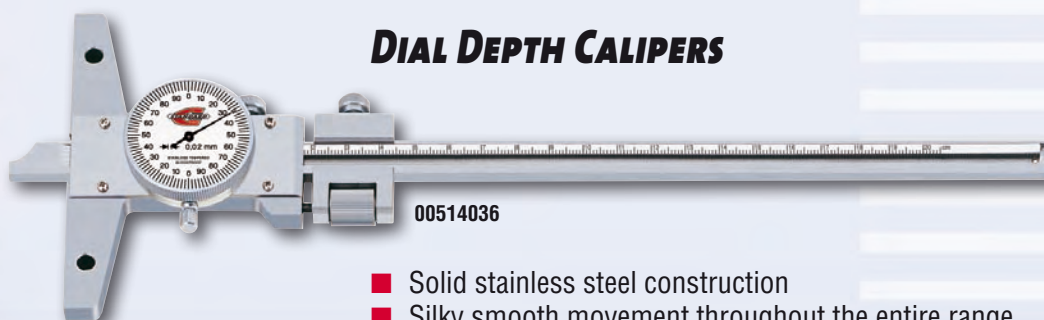
00514030

The finest of vernier calipers for accurate work

- Made of stainless steel
- Satin-chrome finished scale and vernier
- Supplied in a shop-hardened case with inspection report

Order No.	Range	Reading	Main Cross Section	Bridge Length
Metric Models				
00514030	0 ÷ 150	0,02	8 x 3	100
00514031	0 ÷ 150	0,05	8 x 3	100
00514032	0 ÷ 250	0,02	12 x 4	125
00514033	0 ÷ 250	0,05	12 x 4	125
00514034	0 ÷ 500	0,02	12 x 4	150
00514035	0 ÷ 500	0,05	12 x 4	150
Inch Models				
00524020	0 ÷ 6	0.001	0.32 x 0.12	4
00524021	0 ÷ 10	0.001	0.48 x 0.16	5
00524022	0 ÷ 20	0.001	0.48 x 0.16	6

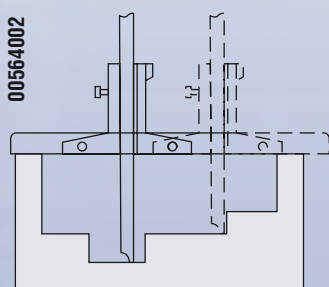
DIAL DEPTH CALIPERS



00514036

- Solid stainless steel construction
- Silky smooth movement throughout the entire range
- Supplied in a shop-hardened case, with inspection report

Order No.	Range	Reading	Range per Rev	Bridge Length	Dial Face
Metric Models					
00514036	0 ÷ 150	0,02	2	100	White
00514037	0 ÷ 200	0,02	2	100	White
00514038	0 ÷ 300	0,02	2	100	White
Inch Models					
00524030	0 ÷ 6	0.001	0.100	4	White
00524031	0 ÷ 8	0.001	0.100	4	White
00524032	0 ÷ 12	0.001	0.100	4	White



00564002

REMOVABLE BRIDGE FOR DEPTH CALIPERS

- Made of stainless steel. Available for all models.

Order No.	Description
00564002	Optional bridge, size 180 mm
00564003	Optional bridge, size 260 mm
00564004	Optional bridge, size 320 mm

ELECTRONIC OUTSIDE MICROMETERS IP54



- Protection level IP54
- Absolute measurement
- Carbide-tipped measuring faces
- Digital Resolution to 0,001 mm/0.00005 in
- Micrometer head resolution to 0,01 mm/0.0001 in
- Sizes over 25 mm/1 in include a setting standard
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report

Main Features

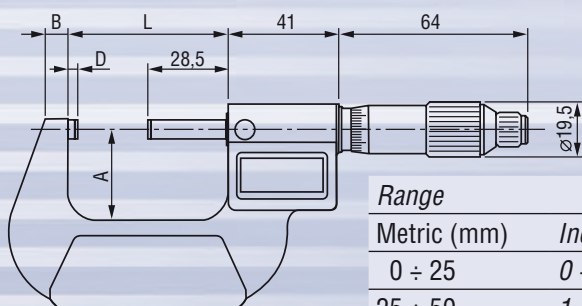
- Auto power ON
- Inch/Metric conversion
- Origin data set
- SR44 battery
- Auto power OFF

Order No.	Range	Resolution		Accuracy	Setting Standard
		Digital	Micrometer heads		
Metric Models	mm	mm	mm	mm	mm
00134001	0 ÷ 25	0,001	0,01	0,004	
00134002	25 ÷ 50	0,001	0,01	0,004	25
00134003	50 ÷ 75	0,001	0,01	0,005	50
00134004	75 ÷ 100	0,001	0,01	0,005	75
Inch Models	in	in	in	in	in
00134021	0 ÷ 1	0.00005	0.0001	0.00016	
00134022	1 ÷ 2	0.00005	0.0001	0.00016	1
00134023	2 ÷ 3	0.00005	0.0001	0.00020	2
00134024	3 ÷ 4	0.00005	0.0001	0.00020	3

Electronic Outside Micrometer Sets IP54

Order No.	Range	Pieces	Setting Standard
Metric Models	mm		mm
00134040	0 ÷ 75	3	25 and 50
00134041	0 ÷ 100	4	25, 50 and 75
Inch Models	in		in
00134045	0 ÷ 3	3	1 and 2
00134046	0 ÷ 4	4	1, 2 and 3

Delivered complete in a plastic case with inspection report for each micrometer.



Range		Dimensions (mm)			
Metric (mm)	Inch (in)	A	B	D	L
0 ÷ 25	0 ÷ 1	24	6	3,0	32
25 ÷ 50	1 ÷ 2	32	8	3,0	57
50 ÷ 75	2 ÷ 3	45	8	3,0	82
75 ÷ 100	3 ÷ 4	57	10	3,0	107

EXTERNAL
MICROMETERS



DIGIT OUTSIDE MICROMETERS



00114101



00114111

- High resolution mechanical digit counter for quick and error-free reading
- Carbide-tipped measuring faces
- Counter resolution to 0,001 mm/0.0001 in
- Micrometer head resolution to 0,01 mm/0.0001 in
- Sizes over 25 mm/1 in include a setting standard
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report

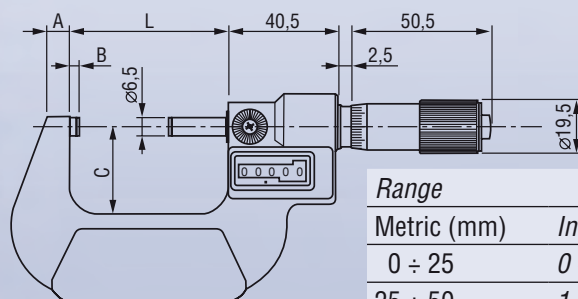
TECNIMETAL

Order No.	Range	Resolution		Accuracy	Setting Standard
		Counter	Micrometer heads		
Metric Models	mm	mm	mm	mm	mm
00114101	0 ÷ 25	0,001	0,01	0,004	
00114102	25 ÷ 50	0,001	0,01	0,004	25
00114103	50 ÷ 75	0,001	0,01	0,005	50
00114104	75 ÷ 100	0,001	0,01	0,005	75
Inch Models	in	in	in	in	in
00124024	0 ÷ 1	0.0001	0.0001	0.00016	
00124025	1 ÷ 2	0.0001	0.0001	0.00016	1
00124026	2 ÷ 3	0.0001	0.0001	0.00020	2
00124027	3 ÷ 4	0.0001	0.0001	0.00020	3

Digit Outside Micrometer Sets

Order No.	Range	Pieces	Setting Standard
Metric Models	mm		mm
00114110	0 ÷ 75	3	25 and 50
00114111	0 ÷ 100	4	25, 50 and 75
Inch Models	in		in
00124028	0 ÷ 3	3	1 and 2
00124029	0 ÷ 4	4	1, 2 and 3

Delivered complete in a plastic case with inspection report for each micrometer.

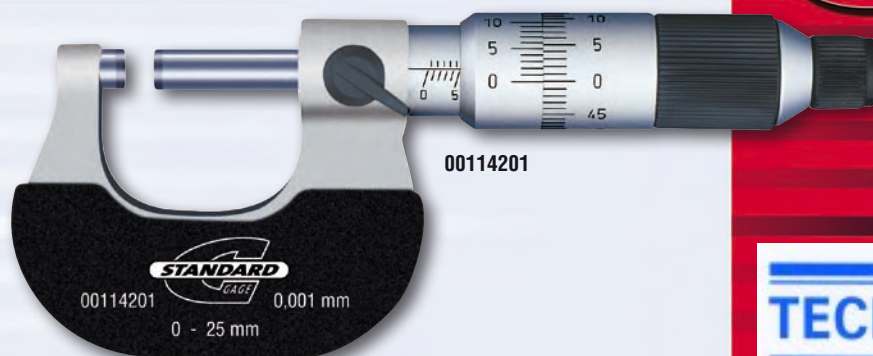


Range		Dimensions (mm)				
Metric (mm)	Inch (in)	A	B	C	L	
0 ÷ 25	0 ÷ 1	6	3,0	24	32	
25 ÷ 50	1 ÷ 2	8	3,0	32	57	
50 ÷ 75	2 ÷ 3	8	3,0	45	82	
75 ÷ 100	3 ÷ 4	10	3,0	57	107	

PARALLAX-FREE OUTSIDE MICROMETERS



9



00114201

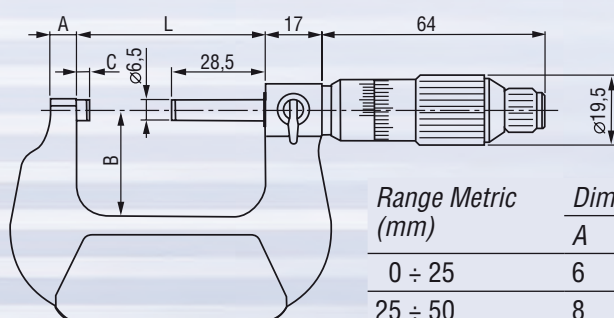
- Parallax-free vernier scale for high precision measurement
- Carbide-tipped measuring faces
- Sizes over 25 mm include a setting standard
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report

Order No.	Range (mm)	Resolution (mm)	Accuracy (mm)	Setting Standard
00114201	0 ÷ 25	0,001	0,004	—
00114202	25 ÷ 50	0,001	0,004	25
00114203	50 ÷ 75	0,001	0,005	50
00114204	75 ÷ 100	0,001	0,005	75

Parallax-free Outside Micrometer Sets

Order No.	Range (mm)	Pieces	Setting Standard (mm)
00114210	0 ÷ 75	3	25 and 50
00114211	0 ÷ 100	4	25, 50 and 75

Delivered complete in a plastic case with inspection report for each micrometer.



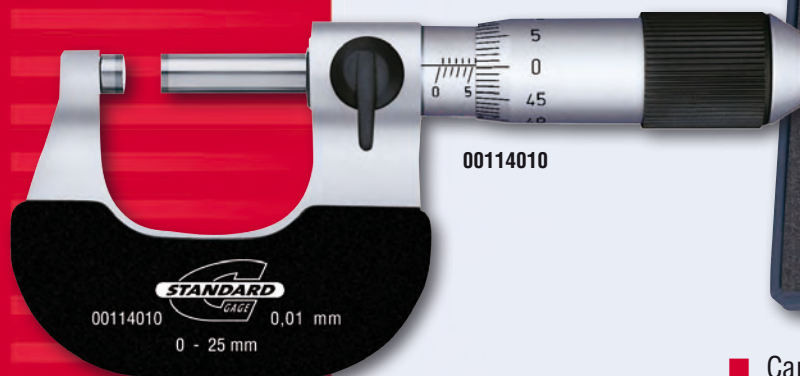
Range Metric (mm)	Dimensions (mm)			
	A	B	C	L
0 ÷ 25	6	24	3,0	32
25 ÷ 50	8	32	3,0	57
50 ÷ 75	8	45	3,0	82
75 ÷ 100	8	57	3,0	107

TECNIMETAL

EXTERNAL
MICROMETERS



VALUE MICROMETERS



00114010



00114041

- Carbide-tipped measuring faces
- Graduations to 0,01 mm/0.0001 in
- Sizes over 25 mm/1 in include a setting standard
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report

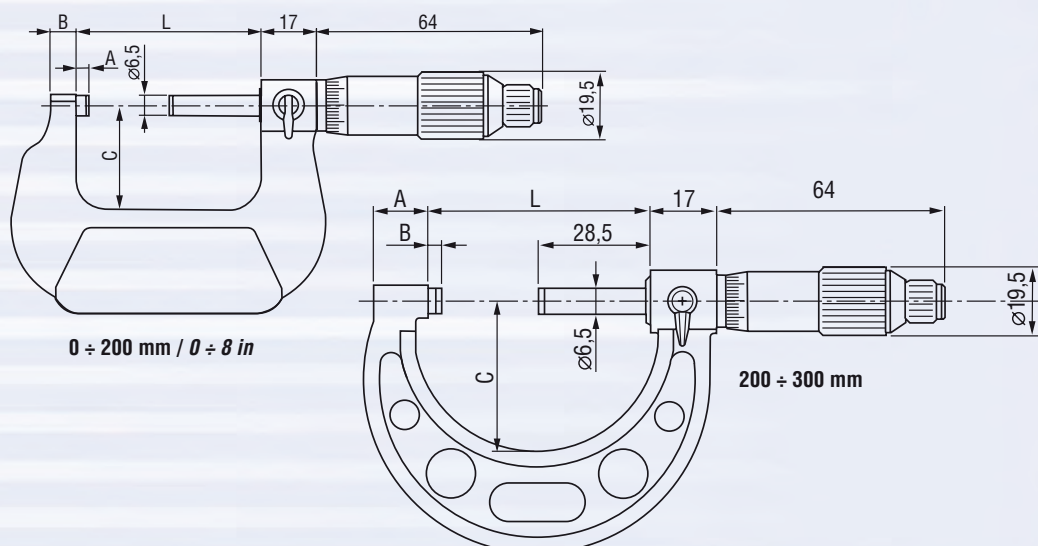
TECNIMETAL

<i>Order No.</i>	<i>Range</i>	<i>Accuracy</i>	<i>Setting Standard</i>
Metric Models	mm	mm	mm
00114010	0 ÷ 25	0,004	—
00114011	25 ÷ 50	0,004	25
00114012	50 ÷ 75	0,005	50
00114013	75 ÷ 100	0,005	75
00114014	100 ÷ 125	0,006	100
00114015	125 ÷ 150	0,006	125
00114016	150 ÷ 175	0,007	150
00114017	175 ÷ 200	0,007	175
00114018	200 ÷ 225	0,008	200
00114019	225 ÷ 250	0,008	225
00114020	250 ÷ 275	0,009	250
00114021	275 ÷ 300	0,009	275
Inch Models	in	in	in
00124010	0 ÷ 1	0.00016	—
00124011	1 ÷ 2	0.00016	1
00124012	2 ÷ 3	0.00020	2
00124013	3 ÷ 4	0.00020	3
00124014	4 ÷ 5	0.00024	4
00124015	5 ÷ 6	0.00024	5
00124016	6 ÷ 7	0.00028	6
00124017	7 ÷ 8	0.00028	7

Value Micrometer Sets

<i>Order No.</i>	<i>Range</i>	<i>Pieces</i>	<i>Setting Standard</i>
Metric Models	mm		mm
00114040	0 ÷ 75	3	25 and 50
00114041	0 ÷ 100	4	25, 50 and 75
Inch Models	in		in
00124040	0 ÷ 3	3	1 and 2
00124041	0 ÷ 4	4	1, 2 and 3

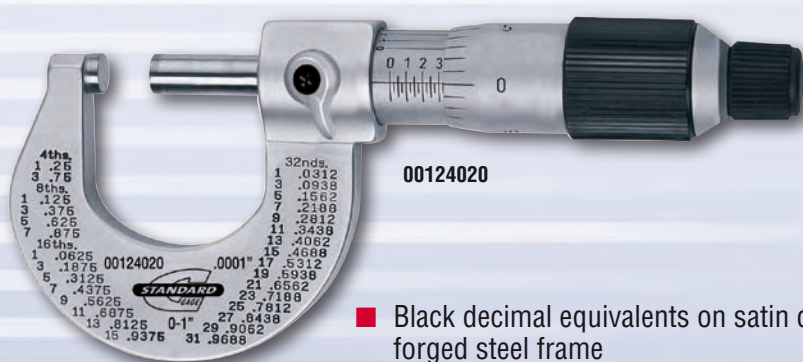
Delivered complete in a plastic case with inspection report for each micrometer.



Range		Dimensions (mm)			
Metric (mm)	Inch (in)	A	B	C	L
0 ÷ 25	0 ÷ 1	3,0	6	24	32
25 ÷ 50	1 ÷ 2	3,0	8	32	57
50 ÷ 75	2 ÷ 3	3,0	8	45	82
75 ÷ 100	3 ÷ 4	3,0	8	57	107
100 ÷ 125	4 ÷ 5	3,0	8	70	133
125 ÷ 150	5 ÷ 6	3,0	8	82	158
150 ÷ 175	6 ÷ 7	5,5	8	95	183
175 ÷ 200	7 ÷ 8	5,5	8	107	209
200 ÷ 225		5,5	19,4	130	234
225 ÷ 250		5,5	19,4	142	260
250 ÷ 275		5,5	19,4	155	285
275 ÷ 300		5,5	19,4	168	310

CHROME FRAME MICROMETERS

with decimal equivalents on frame



00124020

- Black decimal equivalents on satin chrome finished forged steel frame
- Carbide-tipped measuring faces with a 0.25 in dia.
- Graduations to 0.0001 in
- Sizes over 1 in include a setting standard
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report

Order No.	Range	Accuracy	Setting Standards
	in	in	in
00124020	0 ÷ 1	0.00016	
00124021	1 ÷ 2	0.00016	1
00124022	2 ÷ 3	0.00020	2

EXTERNAL
MICROMETERS

EXTERNAL MICROMETERS

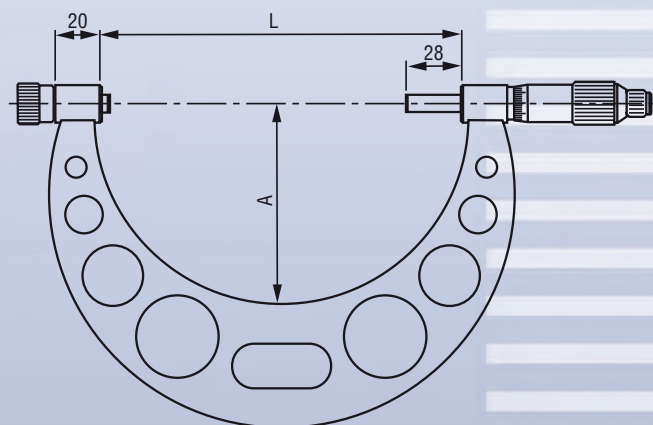
MICROMETERS WITH INTERCHANGEABLE ANVILS

TECNIMETAL

- Steel-plate frame up to 300 mm
Pipe combined frame over 300 mm
- Graduations to 0,01 mm
- Include setting standard
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report



Order No.	Range (mm)	Accuracy (mm)	A (mm)	L (mm)	Anvil	Setting Standard
00114030	0 ÷ 150	0,006	82	158	6	5
00114031	150 ÷ 300	0,009	165	308	6	6
00114032	300 ÷ 450	0,011	250,5	459	6	6
00114033	450 ÷ 600	0,015	321	609	6	6
00114034	600 ÷ 750	0,016	401	759	6	6
00114035	750 ÷ 900	0,020	476	909	6	6
00114036	900 ÷ 1050	0,021	551	1059	6	6



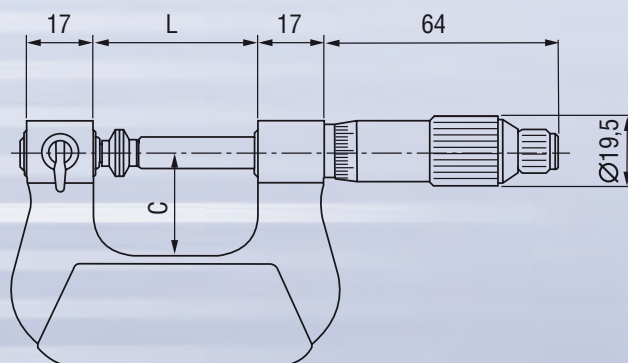
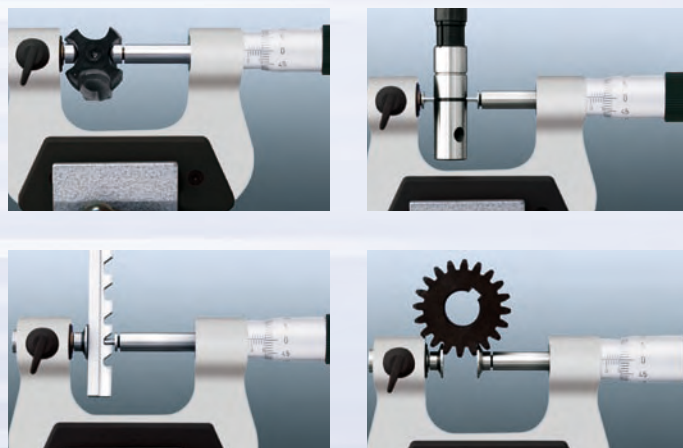
UNIVERSAL MICROMETERS – Non-ROTATING SPINDLE

- Wide application range through the availability of 7 pairs of interchangeable contact points
- Hardened steel anvil
- Graduations to 0,01 mm
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report



00114055

Order No.	Range (mm)	Accuracy (mm)	C (mm)	L (mm)
00114055	0 ÷ 25	0,004	26	42
00114056	25 ÷ 50	0,004	38	67
00114057	50 ÷ 75	0,005	50	92
00114058	75 ÷ 100	0,005	62	118

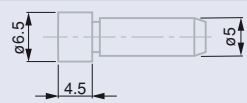
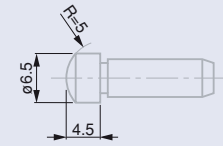
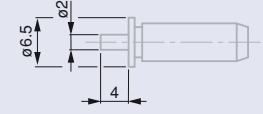
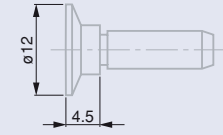
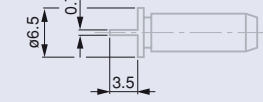
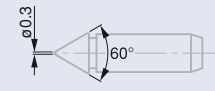
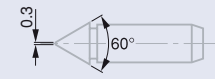


EXTERNAL
MICROMETERS

EXTERNAL MICROMETERS

INTERCHANGEABLE MEASURING TIPS IN PAIRS

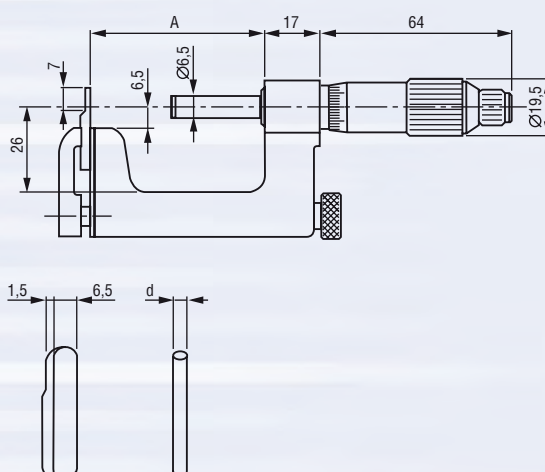


Order No.	Description	
00164001	Flat, 6,5 mm dia.	
00164002	Spherical, R = 5 mm	
00164003	Small and flat, 2 mm dia.	
00164004	Disk-shaped, 12 mm dia.	
00164005	Blade-type, H x L = 0,7 x 3,5 mm	
00164006	Cone-shaped, 60°, R = 0,3 mm	
00164007	Knife-edged, 60°, 0,3 mm	
00164008	Full set of contact points	

UNIVERSAL MICROMETERS

- Carbide-tipped spindle tip
- Hardened steel anvil
- Graduations to 0,01 mm
- Ratchet friction thimble and locking nut
- Chrome plated frame
- Delivered in a plastic case with inspection report

TECNIMETAL



Order No.	Range (mm)	Accuracy (mm)	A (mm)	d (mm)
00114053	0 ÷ 25	0,004	28,5	3
00114054	25 ÷ 50	0,004	53,5	5



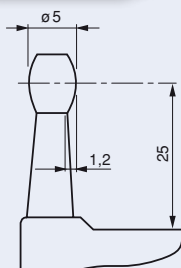
EXTERNAL
MICROMETERS



TECNIMETAL

TUBE MICROMETER

- Carbide-tipped spindle tip
- Hardened steel anvil
- Graduations to 0,01 mm
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report



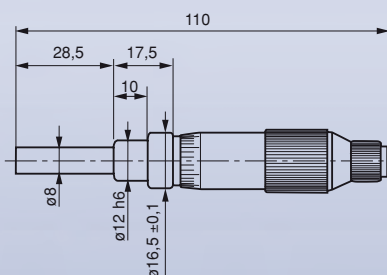
Order No.	Range (mm)	Accuracy (mm)
00114052	0 ÷ 25	0,006

MICROMETER HEADS WITH NON-ROTATING SPINDLE

- Carbide-tipped spindle tip
- Ratchet friction thimble and locking nut
- Delivered in a plastic case with inspection report



00114050



Order No.	Range (mm)	Reading (mm)	Accuracy (mm)
00114050	0 ÷ 25	0,01	0,003
00114051	0 ÷ 25	0,002	0,003

VERNIER TOOL SET, METRIC

TECNIMETAL



Order No.	Description	
00514100	Metric Vernier tool set including:	
	1 Micrometer with a 0 ÷ 25 mm range, 0,01 mm reading	00114010
	1 Vernier caliper with a 150 mm range, 0,05 mm reading	00514011
	1 Suited black colored plastic case	
	1 Inspection report provided with each tool	

VERNIER TOOL SET, INCH

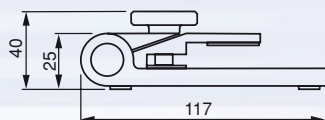


Order No.	Description	
00524100	Inch Vernier tool set including:	
	1 Micrometer with a 0 ÷ 1 in range, 0.0001 in reading	00124010
	1 Vernier caliper 6 in, 0.001 in /1/128 in reading	00524001
	1 Suited black colored plastic case	
	1 Inspection report provided with each tool	

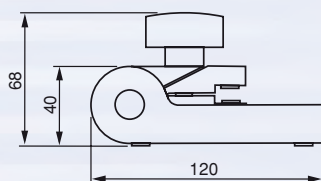
TOOL
SETS


Order No. *Description*
00534100 Electronic tool set including:

- | | |
|---|----------|
| 1 Electronic micrometer with a 0 ÷ 25 mm range, 0,001 mm resolution | 00134001 |
| 1 VALUE caliper, 150 mm, 0,01 mm resolution | 00534020 |
| 1 Suited black colored plastic case | |
| 1 Inspection report provided with each tool | |



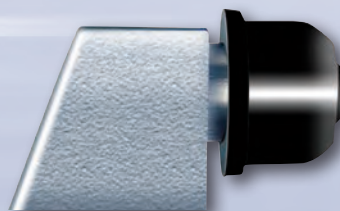
Order No.	Description
00164009	Micrometer stand



Order No.	Description
00164010	Micrometer stand – Heavy model

INTERCHANGEABLE SPHERICAL ANVIL

5 mm / 0.2 in steel ball diameter. Used for measuring tube thickness.



Order No.	Description
00164011	Interchangeable spherical anvil

MICROMETER
ACCESSORIES


TECNIMETAL

SETTING STANDARDS

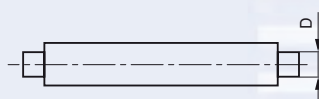
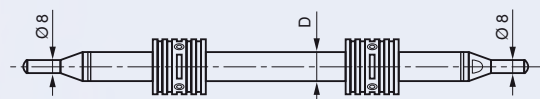


Flat measuring face



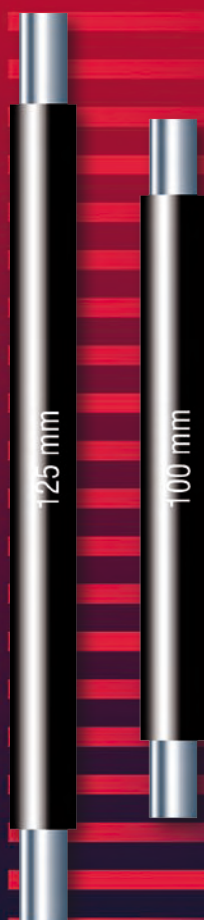
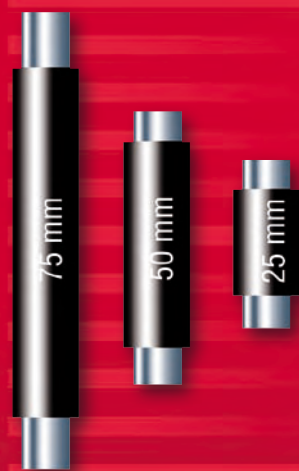
Spherical measuring face

- For calibrating zero position on outside micrometers
- With heat insulating handle to prevent heat expansion
- Delivered with inspection report



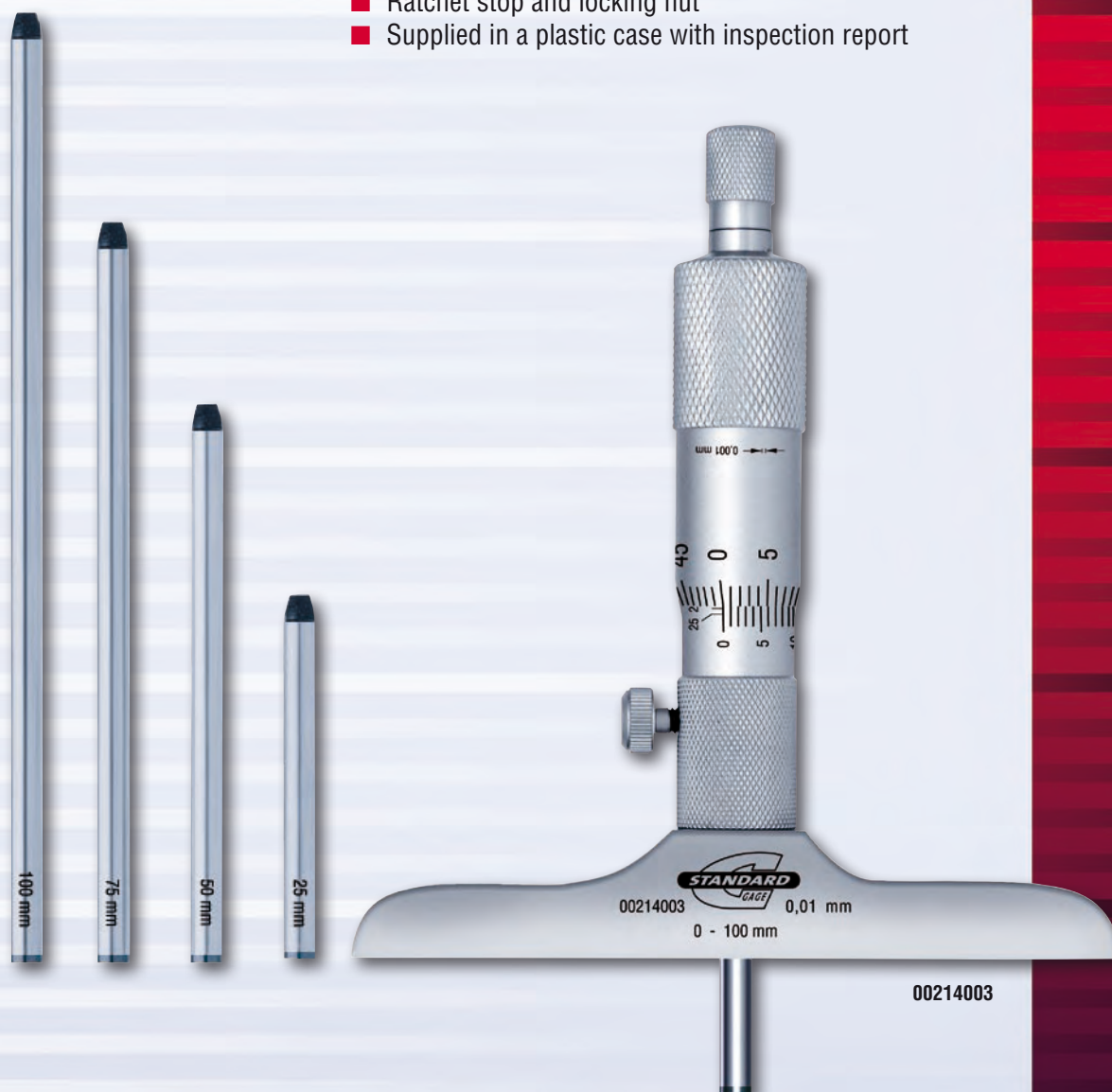
<i>Order No.</i>	<i>Nominal dimensions</i>	<i>Precision</i>	<i>D</i>	<i>Measuring faces</i>
Metric Models	mm	mm	mm	
02164001	25	± 0,0012	7	
02164002	50	± 0,0012	7	
02164003	75	± 0,0015	7	
02164004	100	± 0,0020	8	
02164005	125	± 0,0025	8	
02164006	150	± 0,0025	8	
02164007	175	± 0,0025	8	
02164008	200	± 0,0035	8	
02164009	225	± 0,0035	8	
02164010	250	± 0,0035	8	
02164011	275	± 0,0040	8	
02164012	300	± 0,0040	16	
02164013	325	± 0,0045	16	
02164014	350	± 0,0045	16	
02164015	375	± 0,0045	16	
02164016	400	± 0,0045	16	
02164017	425	± 0,0050	16	
02164018	450	± 0,0050	16	
02164019	475	± 0,0050	16	
02164020	500	± 0,0050	16	
02164021	525	± 0,0055	16	
02164022	575	± 0,0055	16	
02164023	625	± 0,0055	16	
02164024	675	± 0,0065	16	
02164025	725	± 0,0065	16	
02164026	775	± 0,0065	16	
02164027	825	± 0,0075	16	
02164028	875	± 0,0075	16	
02164029	925	± 0,0075	16	
02164030	975	± 0,0075	16	
02164031	1050	± 0,0090	23	

<i>Order No.</i>	<i>Nominal dimensions</i>	<i>Precision</i>	<i>D</i>	<i>Measuring faces</i>
Inch Models	in	in	in	
02164101	1	± 0.00008	0.276	
02164102	2	± 0.00008	0.276	
02164103	3	± 0.00008	0.276	
02164104	4	± 0.00012	0.315	
02164105	5	± 0.00016	0.315	
02164106	6	± 0.00016	0.315	
02164107	7	± 0.00020	0.315	



VALUE VERNIER DEPTH MICROMETERS

- High accuracy interchangeable depth rods, adjusted in increments of 25 mm / 1 in. No Need for resetting when changing rods. Rod diameter 4,5 mm
- Satin chrome finish
- Hardened base surface, ground and lapped
- Resolutions: 0,01 mm for metric models
0.001 in for inch models
- Ratchet stop and locking nut
- Supplied in a plastic case with inspection report



00214003

Order No.	Range	Accuracy	Base	Depth Rods
Metric Models	mm	mm	mm	
00214001	0 ÷ 100	0,005	63	4
00214002	0 ÷ 150	0,005	63	4
00214003	0 ÷ 100	0,005	101,5	6
00214004	0 ÷ 150	0,005	101,5	6
Inch Models	in	in	in	
00224001	0 ÷ 4	0.00020	2.5	4
00224002	0 ÷ 6	0.00020	2.5	4
00224003	0 ÷ 4	0.00020	4	6
00224004	0 ÷ 6	0.00020	4	6

THREE-POINT INTERNAL MICROMETERS

Application range from
6 up to 100 mm / 0.275 in
up to 4 in

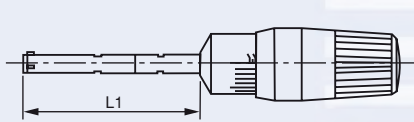
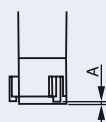
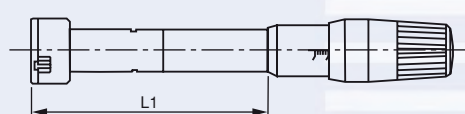
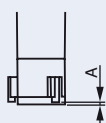
- Measure close to the bottom of blind bores
- Allow access to deep holes with an extension delivered as standard
- Carbide-tipped contact points for ranges $12 \div 100$ mm / $0.5 \div 4$ in
- Supplied with setting rings and extensions
- Delivered with inspection report



00914007



00914008



Order No.	Range	Resolution	Accuracy	Setting Rings	L1	A	Extensions
Metric Models							
00914001	6 ÷ 8	0,001	0,004	6	53,5	0,5	100
00914002	8 ÷ 10	0,001	0,004	8	53,5	0,5	100
00914003	10 ÷ 12	0,001	0,004	10	53,5	0,5	100
00914004	12 ÷ 16	0,005	0,004	16	80	0,5	150
00914005	16 ÷ 20	0,005	0,004	16	80	0,5	150
00914006	20 ÷ 25	0,005	0,004	25	90	0,5	150
00914007	25 ÷ 30	0,005	0,004	25	90	0,5	150
00914008	30 ÷ 40	0,005	0,004	40	97	0,5	150
00914009	40 ÷ 50	0,005	0,005	40	97	0,5	150
00914010	50 ÷ 63	0,005	0,005	62	114	0,5	150
00914011	62 ÷ 75	0,005	0,005	62	114	0,5	150
00914012	75 ÷ 88	0,005	0,005	87	114	0,5	150
00914013	87 ÷ 100	0,005	0,005	87	114	0,5	150
Inch Models							
00924001	0.275 ÷ 0.35	0.0001	0.00016	0.275	2.14	0.02	4
00924002	0.35 ÷ 0.425	0.0001	0.00016	0.350	2.14	0.02	4
00924003	0.425 ÷ 0.5	0.0001	0.00016	0.500	2.14	0.02	4
00924004	0.5 ÷ 0.65	0.0002	0.00016	0.65	3.2	0.02	6
00924005	0.65 ÷ 0.8	0.0002	0.00016	0.65	3.2	0.02	6
00924006	0.8 ÷ 1	0.0002	0.00016	1	3.6	0.02	6
00924007	1 ÷ 1.2	0.0002	0.00016	1	3.6	0.02	6
00924008	1.2 ÷ 1.6	0.0002	0.00016	1.6	3.88	0.02	6
00924009	1.6 ÷ 2	0.0002	0.00020	1.6	3.88	0.02	6
00924010	2 ÷ 2.5	0.0002	0.00020	2.5	4.56	0.02	6
00924011	2.5 ÷ 3	0.0002	0.00020	2.5	4.56	0.02	6
00924012	3 ÷ 3.5	0.0002	0.00020	3.5	4.56	0.02	6
00924013	3.5 ÷ 4	0.0002	0.00020	3.5	4.56	0.02	6

THREE-POINT INTERNAL MICROMETERS

THREE-POINT INTERNAL MICROMETER SETS



00914023

<i>Order No.</i>	<i>Range</i>	<i>Individual Range</i>		<i>Setting Rings</i>		<i>Extensions</i>	
Metric Models	mm	No.	mm	No.	mm	No.	mm
00914020	6 ÷ 12	00914001	6 ÷ 8	00944004	6		
		00914002	8 ÷ 10	00944005	8	00964001	100
		00914003	10 ÷ 12	00944006	10		
00914021	12 ÷ 20	00914004	12 ÷ 16	00944008	16	00964002	150
		00914005	16 ÷ 20				
00914022	20 ÷ 50	00914006	20 ÷ 25	00944010	25	00964003	150
		00914007	25 ÷ 30				
		00914008	30 ÷ 40	00944012	40	00964004	150
		00914009	40 ÷ 50				
00914023	50 ÷ 100	00914010	50 ÷ 63	00944014	62		
		00914011	62 ÷ 75			00964005	150
		00914012	75 ÷ 88	00944017	87		
		00914013	87 ÷ 100				
Inch models	in	No.	in	No.	in	No.	in
00924020	0.275 ÷ 0.5	00924001	0.275 ÷ 0.35	00954003	0.275		
		00924002	0.35 ÷ 0.425	00954004	0.35	00964006	4
		00924003	0.425 ÷ 0.5	00954006	0.5		
00924021	0.5 ÷ 0.8	00924004	0.5 ÷ 0.65	00954007	0.65	00964007	6
		00924005	0.65 ÷ 0.8				
00924022	0.8 ÷ 2	00924006	0.8 ÷ 1	00954009	1	00964008	6
		00924007	1 ÷ 1.2				
		00924008	1.2 ÷ 1.6	00954011	1.6	00964009	6
		00924009	1.6 ÷ 2				
00924023	2 ÷ 4	00924010	2 ÷ 2.5	00954013	2.5		
		00924011	2.5 ÷ 3			00964010	6
		00924012	3 ÷ 3.5	00954016	3.5		
		00924013	3.5 ÷ 4				

Delivered complete in a plastic case with inspection report for each micrometer.

**THREE-POINT
INTERNAL MICROMETERS**

EXTENSIONS FOR THREE-POINT MICROMETERS



<i>Order No.</i>	<i>Description</i>	<i>Sizes</i>
Metric Models mm		
00964001	Extension for range 6 ÷ 12 mm	100
00964002	Extension for range 12 ÷ 20 mm	150
00964003	Extension for range 20 ÷ 30 mm	150
00964004	Extension for range 30 ÷ 50 mm	150
00964005	Extension for range 50 ÷ 100 mm	150
Inch Models in		
00964006	Extension for range 0.275 ÷ 0.500 in	4
00964007	Extension for range 0.500 ÷ 0.800 in	6
00964008	Extension for range 0.800 ÷ 1.2 in	6
00964009	Extension for range 1.2 ÷ 2 in	6
00964010	Extension for range 2 ÷ 4 in	6



SETTING RINGS

Used for zero-setting of internal micrometers and three-point micrometers.

- A:** Uncertainty of stamped diameter
B: Cylindricity
C: Error between actual and nominal values

<i>Order No.</i>	<i>Size</i>	<i>A</i>	<i>B</i>	<i>C</i>
Metric Models mm mm mm mm				
00944004	6	± 0,0015	0,0010	± 0,01
00944005	8	± 0,0015	0,0010	± 0,01
00944006	10	± 0,0015	0,0010	± 0,01
00944008	16	± 0,0015	0,0010	± 0,01
00944010	25	± 0,0015	0,0010	± 0,01
00944012	40	± 0,0015	0,0010	± 0,01
00944014	62	± 0,0015	0,0015	± 0,02
00944017	87	± 0,0015	0,0015	± 0,02
Inch Models in in in in				
00954003	0.275	± 0.00006	0.00004	± 0.0004
00954004	0.350	± 0.00006	0.00004	± 0.0004
00954006	0.500	± 0.00006	0.00004	± 0.0004
00954007	0.650	± 0.00006	0.00004	± 0.0004
00954009	1.000	± 0.00006	0.00004	± 0.0004
00954011	1.600	± 0.00006	0.00004	± 0.0004
00954013	2.500	± 0.00006	0.00006	± 0.0008
00954016	3.500	± 0.00006	0.00006	± 0.0008

DIAL SCRIBING GAUGES

- Solid stainless steel construction
- Silky smooth movement throughout the entire range
- Include inspection report
- Supplied in a shop-hardened case



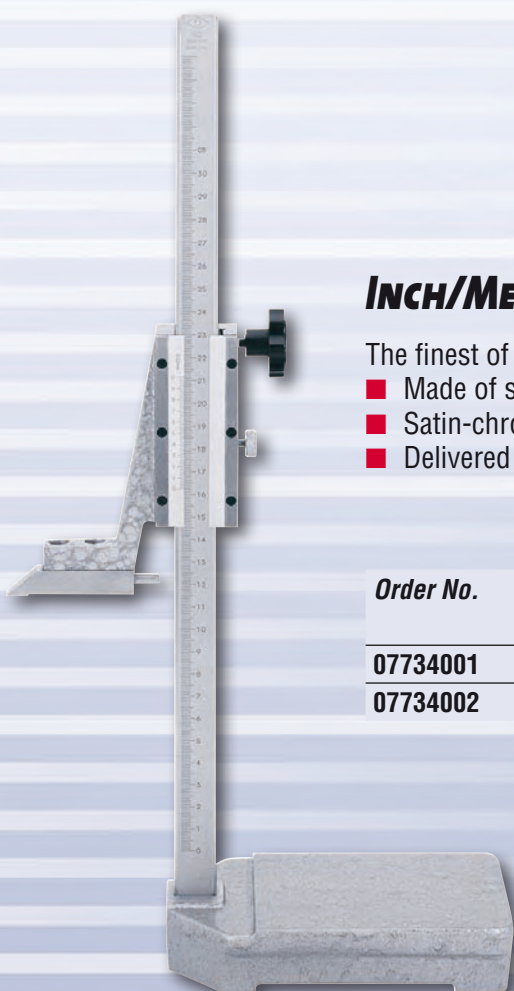
07714001

Order No.	Range	Reading	Range per rev.	Dial Face
Metric Models				
07714001	mm	mm	mm	White
07714002	600	0,01	1,0	White
Inch Models				
07724001	in	in	in	White
07724002	12	0.001	0.100	White
07724002	24	0.001	0.100	White

INCH/METRIC VERNIER SCRIBERS

The finest of vernier scribes for accurate work.

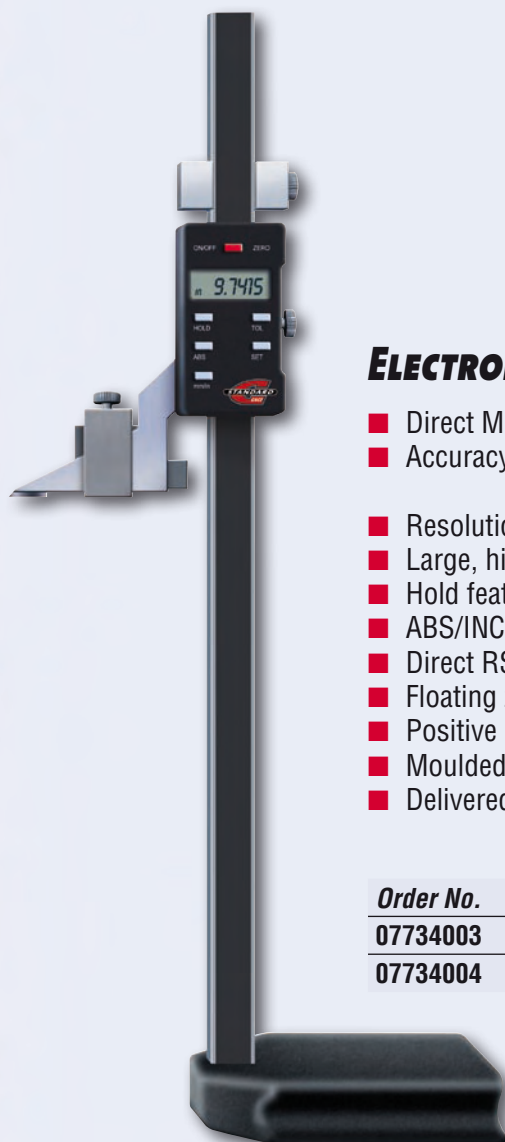
- Made of stainless steel
- Satin-chrome finished scale and vernier
- Delivered with inspection report



07734001

Order No.	Range		Vernier Reading	
	Left scale	Right scale	Left scale	Right scale
07734001	0 ÷ 300 mm	0 ÷ 12 in	0,02 mm	0.001 in
07734002	0 ÷ 500 mm	0 ÷ 20 in	0,02 mm	0.001 in

SCRIBING GAUGES



ELECTRONIC SCRIBERS

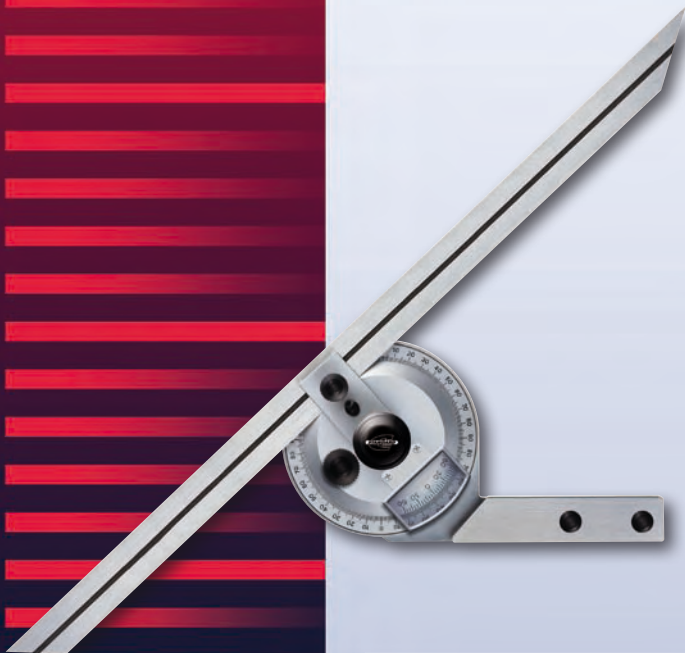
- Direct Metric/Inch Conversion
- Accuracy: Model 300 mm / 12 in: $\pm 0,04$ mm
Model 600 mm / 24 in: $\pm 0,05$ mm
- Resolution to 0,01 mm / 0.0005 in
- Large, high-contrast LC display
- Hold feature
- ABS/INC measurement
- Direct RS232 data output
- Floating zero
- Positive lock, carbide scriber
- Moulded case included
- Delivered with inspection report

<i>Order No.</i>	<i>Range mm</i>	<i>Range in</i>
07734003	300	12
07734004	600	24

07734003

UNIVERSAL VERNIER BEVEL PROTRACTOR, 300 MM / 12 IN

- Made of stainless steel.
- Satin-chrome finished, laser stamped scales
- Parallax free so as to avoid any reading error
- Magnifying glass for easy reading
- Adjustable beam to any position within the measuring range

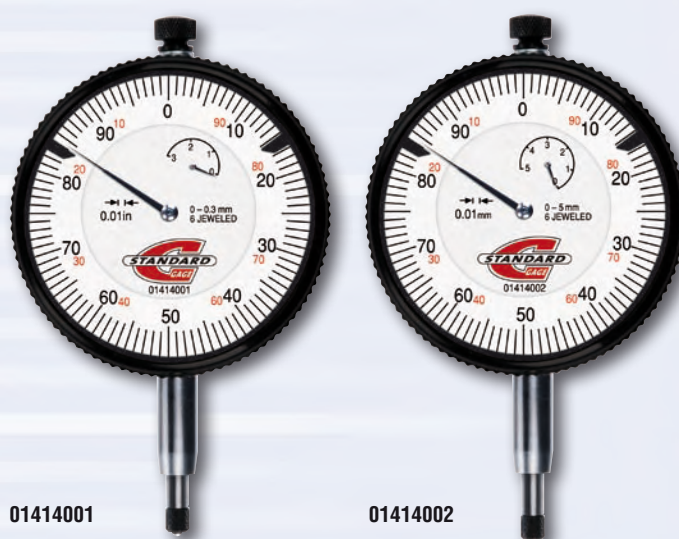

 A universal vernier bevel protractor with a circular scale and a sliding beam. The beam is graduated in degrees and minutes. A magnifying glass is attached to the beam for easy reading.

<i>Order No.</i>	<i>Range</i>	<i>Reading</i>	<i>Scale Length</i>
00634001	4 x 90°	5'	300 mm / 12 in

- Full-metal bezel and case housing
- Fixing shank and plunger in hardened stainless steel
- Insert fitted with a 3,175 mm diameter steel ball tip
- Adjustable tolerance markers
- Measuring insert with a M2,5 thread
- Fixing shank (metric) 8h6 mm dia., AGD2 0.375 in dia.
- Delivered with inspection report

MODELS WITH A 40 MM DIAL DIAMETER, READING TO 0,01 MM

With extra red tinted reverse numbering



01414001

01414002

Order No.	Range	Reading	Travel/Rev.		Graduations
01414001	3 mm	0,01 mm	1 mm	6 Jewelled	0 ÷ 50 ÷ 100
01414002	5 mm	0,01 mm	1 mm	6 Jewelled	0 ÷ 50 ÷ 100

Maximum permissible errors

0,01 mm Reading	Range	
	3 mm	5 mm
Deviation span	10 µm	12 µm
Total deviation span	12 µm	14 µm
Max. hysteresis	3 µm	3 µm
Local deviation span (0,1 mm)	5 µm	5 µm
Repeatability limit	3 µm	3 µm

PRECISION
DIAL GAUGES

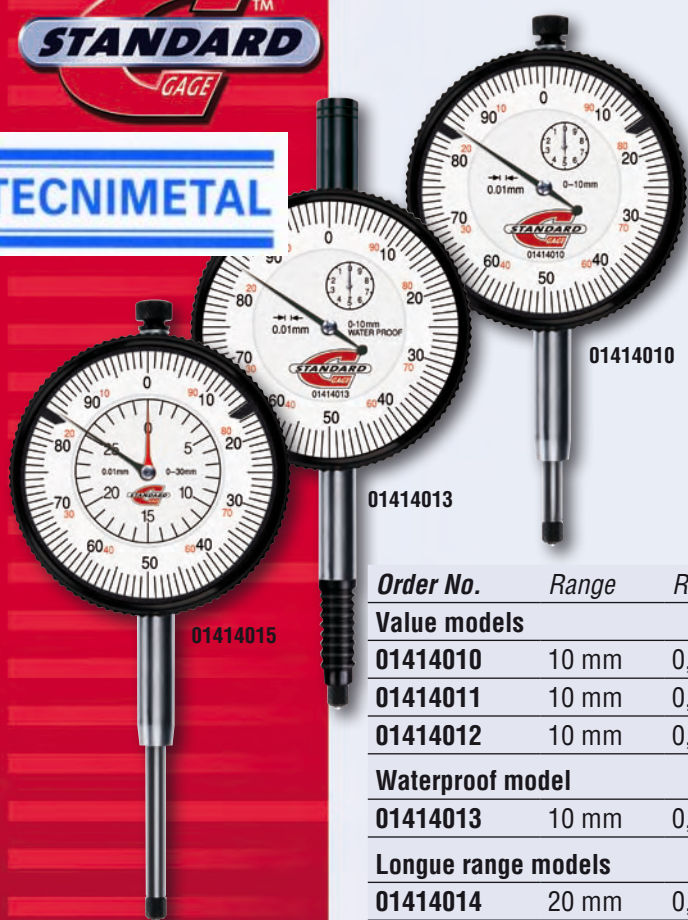

TECNIMETAL

MODELS WITH A 60 MM DIAL DIAMETER, READING TO 0,01 mm

With extra red tinted reverse numbering

Maximum permissible errors

0.01 mm Reading	Range		
	10 mm	20 mm	30 mm
Deviation span	15 µm	22 µm	28 µm
Total deviation span	17 µm	25 µm	30 µm
Max. hysteresis	3 µm	5 µm	5 µm
Local deviation span (0,1 mm)	5 µm	10 µm	10 µm
Repeatability limit	3 µm	3 µm	3 µm



Order No.	Range	Reading	Travel/Rev.	Graduations
Value models				
01414010	10 mm	0,01 mm	1 mm	0 ÷ 50 ÷ 100
01414011	10 mm	0,01 mm	1 mm Jewelled	0 ÷ 50 ÷ 100
01414012	10 mm	0,01 mm	1 mm Jewelled – Shockproof	0 ÷ 50 ÷ 100
Waterproof model				
01414013	10 mm	0,01 mm	1 mm Waterproof	0 ÷ 50 ÷ 100
Longue range models				
01414014	20 mm	0,01 mm	1 mm	0 ÷ 50 ÷ 100
01414015	30 mm	0,01 mm	1 mm	0 ÷ 50 ÷ 100

Waterproof model without adjustable tolerance markers.



MODELS WITH A 60 MM DIAL DIAMETER, READING TO 0,002 mm OR 0,001 mm

Order No.	Range	Reading	Travel/Rev.	Graduations
01414020	3 mm	0,001 mm	0,2 mm Jewelled – Shockproof	0 ÷ 10 ÷ 20
01414021	3 mm	0,002 mm	0,2 mm Jewelled – Shockproof	0 ÷ 10 ÷ 20
01414022	5 mm	0,001 mm	0,2 mm Jewelled – Shockproof	0 ÷ 10 ÷ 20
01414023	5 mm	0,002 mm	0,2 mm Jewelled – Shockproof	0 ÷ 10 ÷ 20

Maximum permissible errors

Range	3 mm		5 mm	
Reading	0,002 mm	0,001 mm	0,002 mm	0,001 mm
Deviation span	9 µm	8 µm	12 µm	9 µm
Total deviation span	10 µm	9 µm	13 µm	10 µm
Max. hysteresis	4 µm	4 µm	4 µm	4 µm
Local deviation span (0,1 mm)	7 µm	6 µm	7 µm	6 µm
Repeatability limit	1 µm	1 µm	1 µm	1 µm

AGD 2 DIAL INDICATORS

TECNIMETAL



01424010



01424011



01424012

- Travel to 1 in
- Continuous reading 0 ÷ 100 in
- AGD 2 with a 2 ÷ 1/4 in dial diameter
- Revolution counter
- Tolerance markers
- Central lug back
- Carbide points
- Inspection report included
- Delivered in a suited case made of industrial plastic

Order No.	Range	Reading	Travel/Rev.	Dial Face	
01424010	1 in	0.001 in	0.100 in	White	
01424011	1 in	0.001 in	0.100 in	Black	
01424012	0.5 in	0.0005 in	0.100 in	White	Shockproof

Maximum permissible errors

0.001 or 0.0005 in reading	Range	
	0.5 in	1 in
Repeatability	0.20 scale division	0.20 scale division
Hysteresis	0.33 scale division	0.33 scale division
Accuracy		
One revolution	1.00 scale division	1.00 scale division
First 2,5 revolution	1.00 scale division	1.00 scale division
> 2,5 thru 10 revolutions	3.00 scale division	2.00 scale division

Standard Accessories

Order No.	Description
01464001	Central lug back for indicators with a 40 mm dial diameter
01464002	Central lug back for indicators with a 60 mm dial diameter

STANDARD GAGE - VISUAL 250

Main features

The VISUAL Vision Machine 250 is the answer to a growing demand of industry for workpieces that could not be measured using common tactile tools.

The new VISUAL 250 is compact but with no compromise on its metrological performances. This manual machine meets most of the market needs for 2D-measurement.

Featuring a solid mechanical construction, the machine can equally be used in the workshop as in the inspection laboratory.

Equipped with TESA-VISTA – the software that requires less than a half-day training – the VISUAL 250 vision machine is a perfect multi-tasking and multi-users inspection means.

■ Exceptional Quality/ Price ratio

The machine has been specially marketed to offer an alternative option in the field of vision at highly optimized costs, whilst guaranteeing optimum accuracy along with a high-quality level.

■ X/Y measuring tables

Both X and Y coordinate tables have a built-in, manually-operated release system, thus speeding up any displacement needed to reach the measurement area.

■ Manual zoom

Your VISUAL 250 comes with an indexable hand-operated zoom, with optical magnifications from 0,7x up to 4,5x (6,5 : 1).

■ Light illumination

The Visual 250 is fitted with two illuminations through LEDs – i.e. one ringlight for episcopic illumination (top) along with one diascopic illumination (bottom) for the part profile projection. Both are controlled over the software interface.

■ Z-axis

This coordinate axis is moved from the front of the machine, directly.

■ Laser pointer

A laser pointer is included to make easier tracing the measurement zone on the part being inspected.



Clamp system

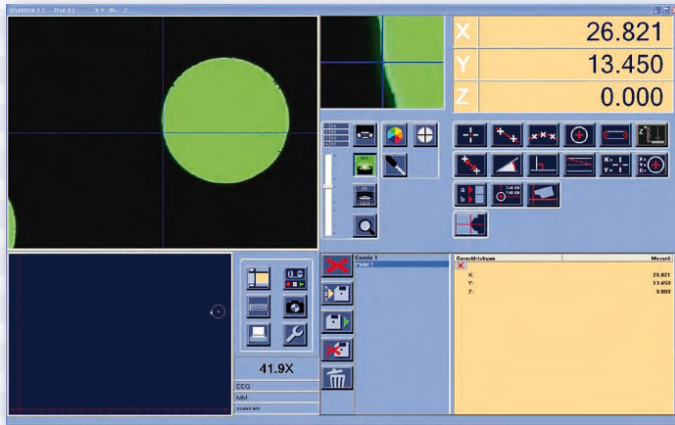
The Visual 250 can be used in conjunction with the VISIOFIX clamping system, which has been specially developed for vision machines. Consisting of many different elements, this system is available in either of the two following kits:

- VisioFix LITE, including 35 clamping elements
- VisioFix STANDARD, including 51 clamping elements

Software

TESA-VISTA allows quick and accurate measurement of most geometrical part features. This application software can be run by a trained operator as well as by a metrologist. It provides the user-friendliness and flexibility needed to create measurement reports. Training takes just half a day.

A clearly arranged User's interface makes this machine very easy to use.



Technical specifications

Releasable X-axis	✓
Releasable Y-axis	✓
Measuring volume (X/Y/Z)	250 x 150 x 200 mm
Maximum workpiece weight	10 kg
Accuracy	
MPE XY (E1 XY)	3,9 µm + L /150** (L in mm)
MPE XY (E2 XY)	4,9 µm + L /150** (L in mm)

**m≤5 kg, uniformly distributed

Camera and Optics

CCD colour camera, 752 x 582 pixels	✓
Indexable zoom (0,7x up to 4,5x)	✓
Diascopic illumination, white LED	✓
Ringlight with a white LED	✓
Red laser pointer for tracing	✓

Additional specifications

Weight (w/o viewing screen and computer)	180 kg
Power supply	115 to 230 Vac +/- 10%, 50 to 60 Hz
Size (w/o viewing screen and computer), L x H x D	716 x 1015 x 753 mm
Reference temperature	20°C +/- 1°C
Operating temperature range	10°C to 40°C
Relative humidity	< 80%, non-condensing
TESA-VISTA application software	✓

VISION
MACHINE



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