

MEASURING HAND TOOLS

In 1981, Sylvac launches the first caliper with digital read-out on the market. Quickly, other models followed and the market of the instruments with hand tool add formidable rise.

Sylvac did not remain behind and proposes today a range of calipers with digital read-out of a measurement capacity going from 150 to 3000 mm. The family of the instruments with hand is completed by scribing and measuring instruments.

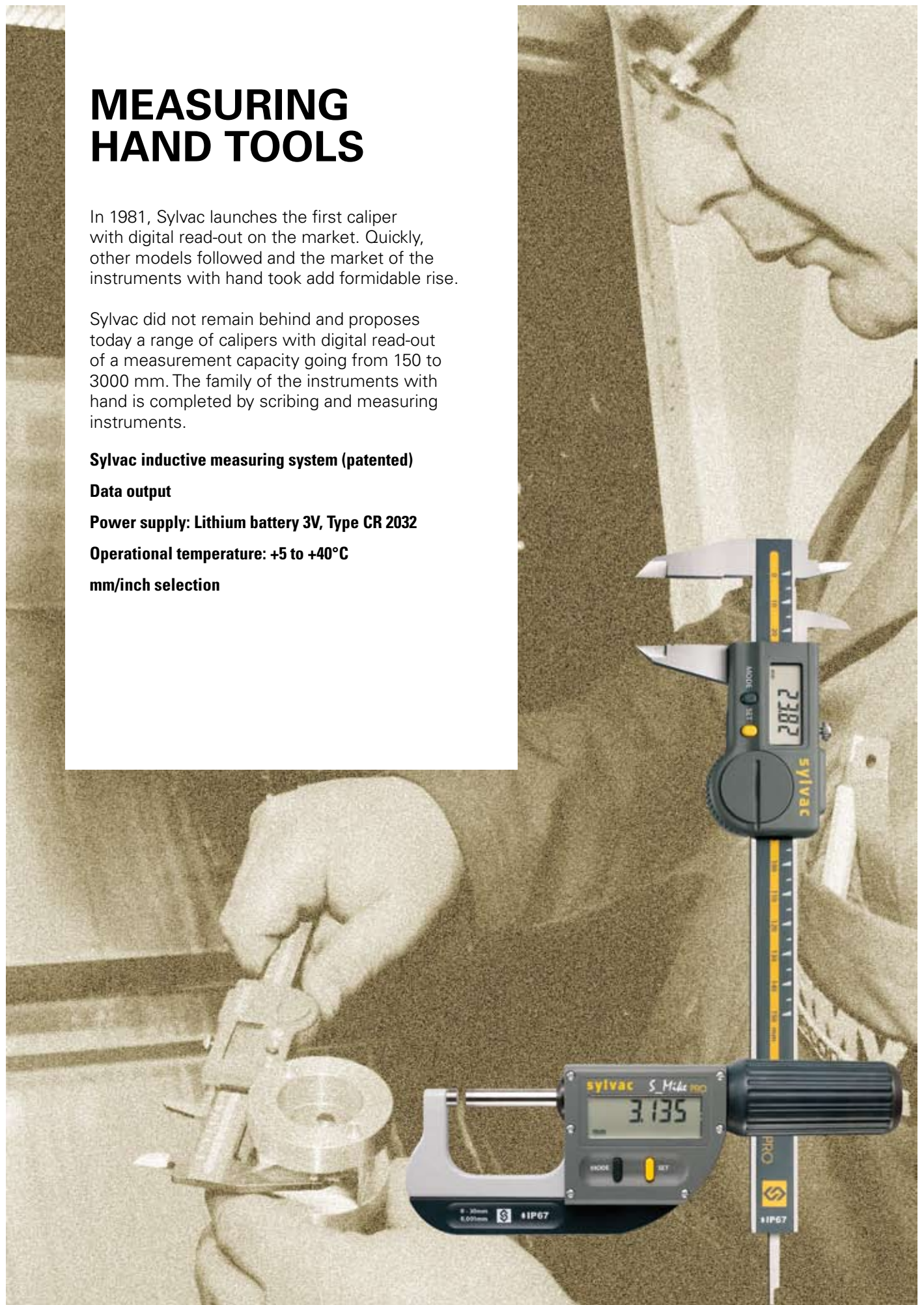
Sylvac inductive measuring system (patented)

Data output

Power supply: Lithium battery 3V, Type CR 2032

Operational temperature: +5 to +40°C

mm/inch selection



Professionnal Caliper

S_Cal PRO

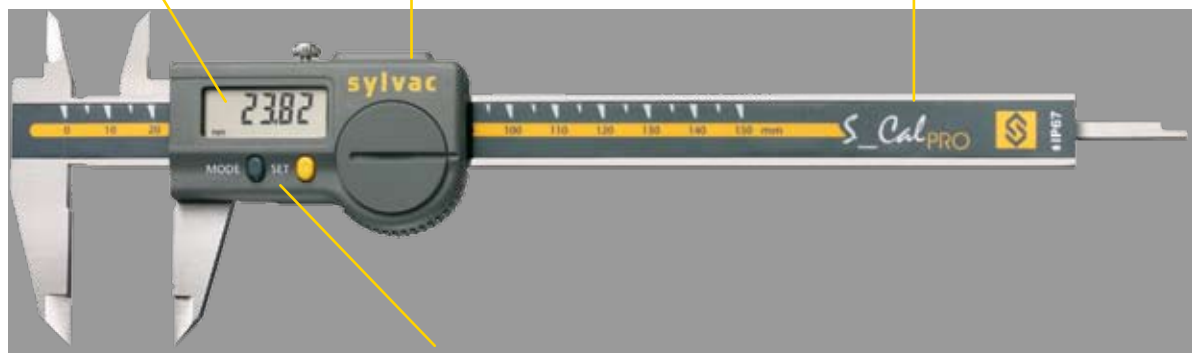
DESCRIPTION

- Water protected for heavy-duty work with coolants and lubricants, protection rating IP67 according to IEC 60529, with or without connector
- Self-contained use : 12'000 hours continuously
- Automatic wake-up by moving the electronic on his frame. (system S.I.S)
- Sleeping mode after 20 min. of non use. (system S.I.S)
- Position memorized in sleeping mode (system S.I.S)
- Maximum velocity of displacement : 2.5 m/sec
- Mechanical frame in stainless steel, hardened and grinded
- Version with thumb wheel on request
- Great comfort of use thanks to its ergonomic frame

Digital display LCD,
Height of digits 7 mm

S_Connect Proximity

Thickness of frame 3.5 mm



Simple and intuitive
functions

SIS Smart
Inductive
System

**SWISS
QUALITY**

IP67

USB

RS232

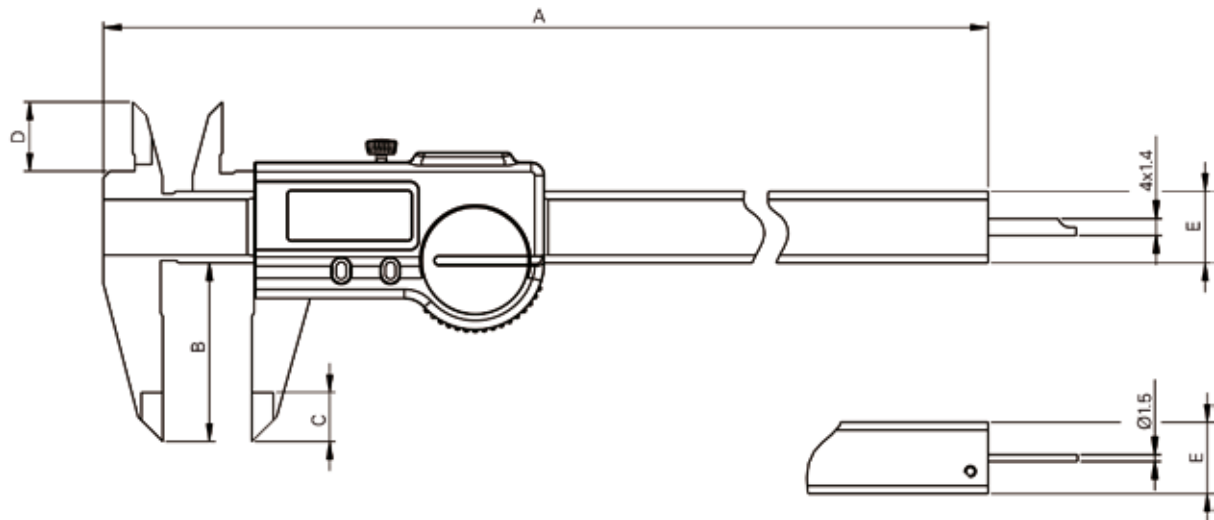
Wifi

PROXIMITY

Professionnal Caliper

S_Cal PRO

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		910.1502	910.1507	910.1522	910.1532
Measuring range	mm	150	150	200	300
Max. Error G	µm	20 ¹⁾	20 ¹⁾	30	30
A	mm	234.5	234.5	290	387
B	mm	40	40	50	64
C	mm	11	11	14	14
D	mm	16	16	19	19
E	mm	16 x 3.5	16 x 3.5	16 x 3.5	16 x 4
Depth rod	mm	4 x 1.4	Ø 1.5	4 x 1.4	---
Protection rating according to IEC 60529		IP67 with or without connector			
S_Connect : Proximity		USB / RS232 / Digimatic / Wireless ²⁾			
Zero setting		●			
Smart Inductive Sensor		●			

¹⁾ > 100 mm : 30 µm / DIN 862

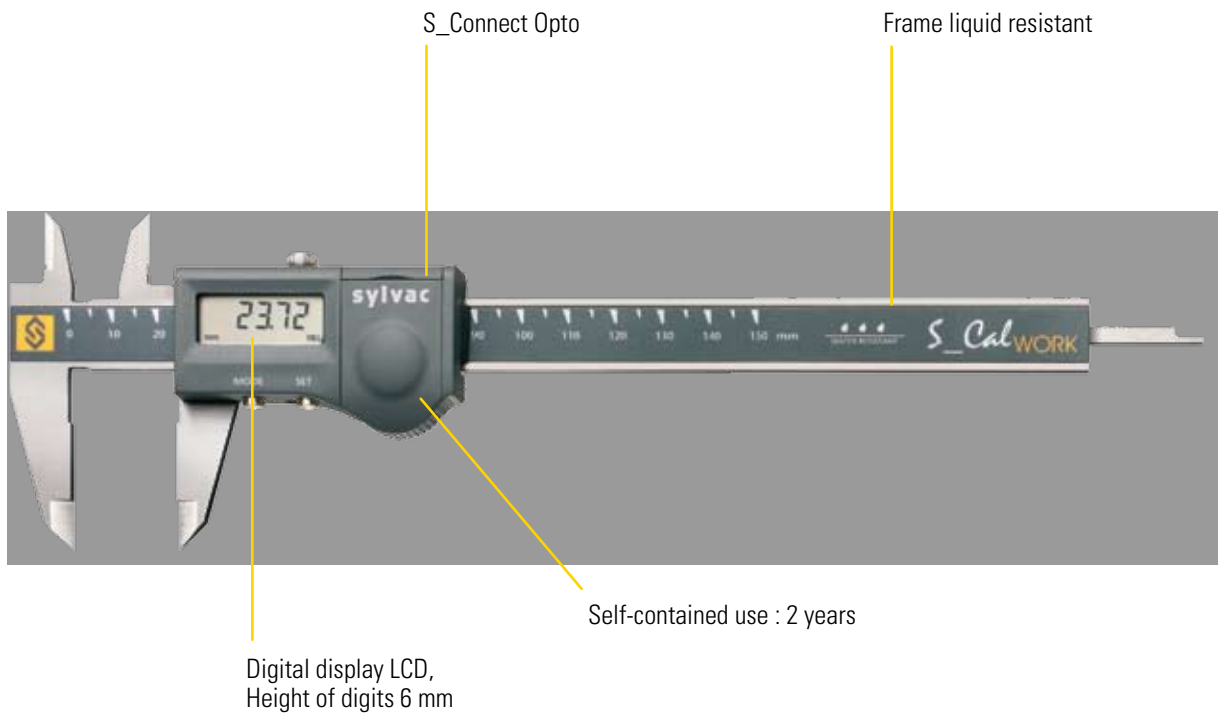
²⁾ see cables chapter

Workshop caliper

S_Cal WORK

DESCRIPTION

- Maximum velocity of displacement : 2 m/sec
- Mechanical frame in stainless steel, hardened and grinded
- Self-contained use : 5'000 hours continuously
- Automatic switch off mode
- Version with thumb wheel on request



USB

RS232

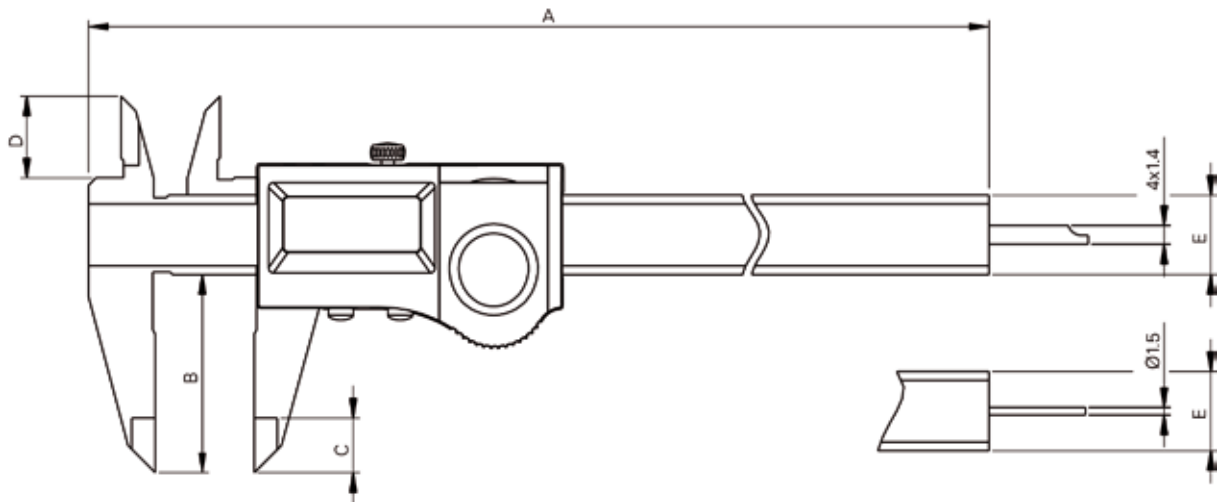
Wifi

OPTO

Workshop caliper

S_Cal WORK

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		910.0502	910.0507	910.0522	910.0527	910.0532
Measuring range	mm	150	150	200	200	300
Max. Error G	µm	20 ¹⁾	20 ¹⁾	30	30	30
A	mm	233	233	290	290	385
B	mm	40	40	50	50	65
C	mm	10	10	14	14	14
D	mm	16	16	20	20	20
E	mm	16 x 3	16 x 3	16 x 3	16 x 3	16 x 4
Depth rod	mm	4 x 1.4	Ø 1.5	4 x 1.4	Ø 1.5	---
Protection rating according to IEC 60529		IP54 with or without connector				
S_Connect : Opto		USB / RS232 / Digimatic / Wireless ²⁾				
Zero setting		●				
REL and ABS functions		●				

¹⁾ > 100 mm : 30 µm / DIN 862

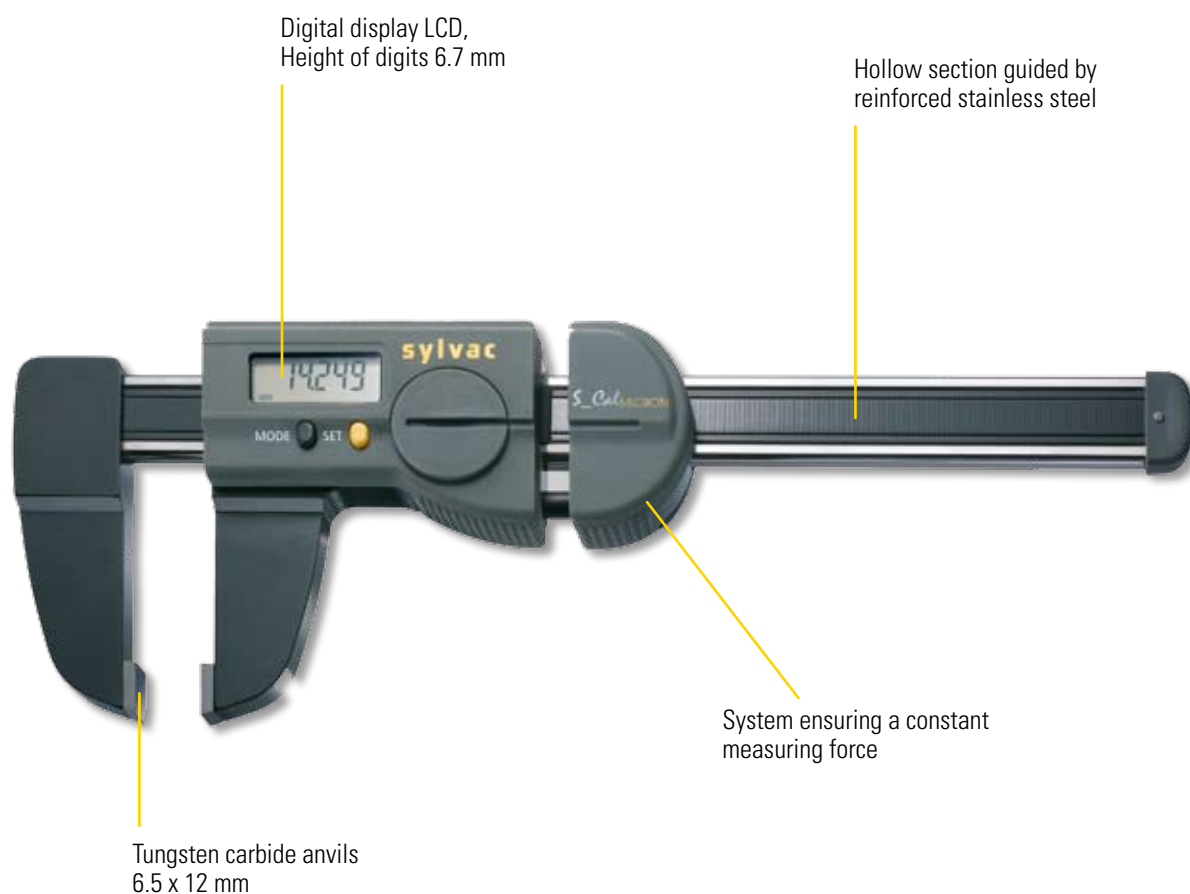
²⁾ see cables chapter

The micron caliper

S_Cal Micron

DESCRIPTION

- PRESET function
- Digital display LCD, height of digits 6.7 mm
- Simplex transmission
- Constant measuring force
- Self-contained use : 12'000 hours continuously
- Delivered with paperboard box, without support



SIS | Smart Inductive System

SWISS QUALITY

USB

RS232

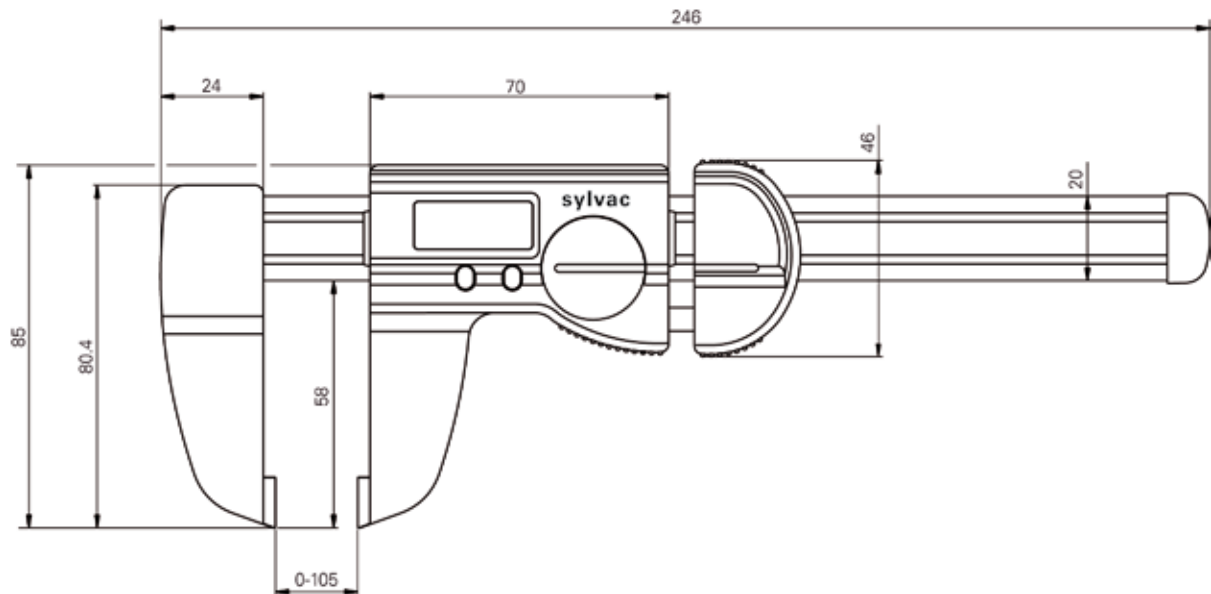
Wifi

PROXIMITY

The micron caliper

S_Cal Micron

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		810.1901
Measuring range	mm	0-100
Max. Error	µm	4 ¹⁾
Repeatability	µm	2
Measuring force	N	2.5-3N
Beam	mm	5 x 20
Measuring surface	mm	6.5 x 12
S_Connect : Proximity		USB / RS232 / Digimatic / Wireless ²⁾
Tungsten carbide anvils		●
PRESET function		●
Tolerance function		●
Smart Inductive Sensor		●

¹⁾ ±

²⁾ see cables chapter

S_Cal + S_Cal Micron

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Calibration certificate (S_Cal Micron)

APPLICATIONS



Thickness measurement



External measurement



Depth measurement



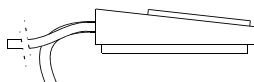
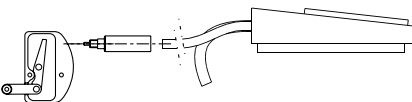
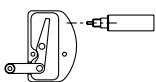
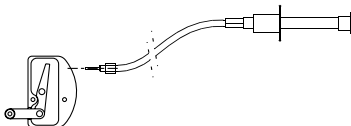
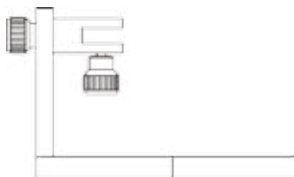
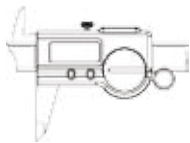
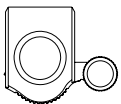
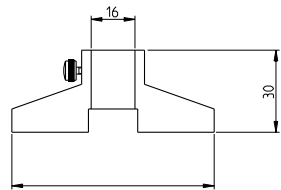
S_Cal Micron



S_Cal Micron on stand with lifting device

S_Cal + S_Cal Micron

ACCESSORIES



		S_CAL PRO	S_CAL WORK	S_Cal Micron
910.2205	Base for Depth Measurement	●	●	
810.2201	Thumb wheel device		●	
910.2201	Thumb wheel device	●		
810.2210	Stand			●
810.2215	Lifting device with photo-cable			●
810.2216	Pneumatic lifting device			●
810.2217	Pneumatic lifting device with footpedal			●
810.2218	Foot-pedal only			●

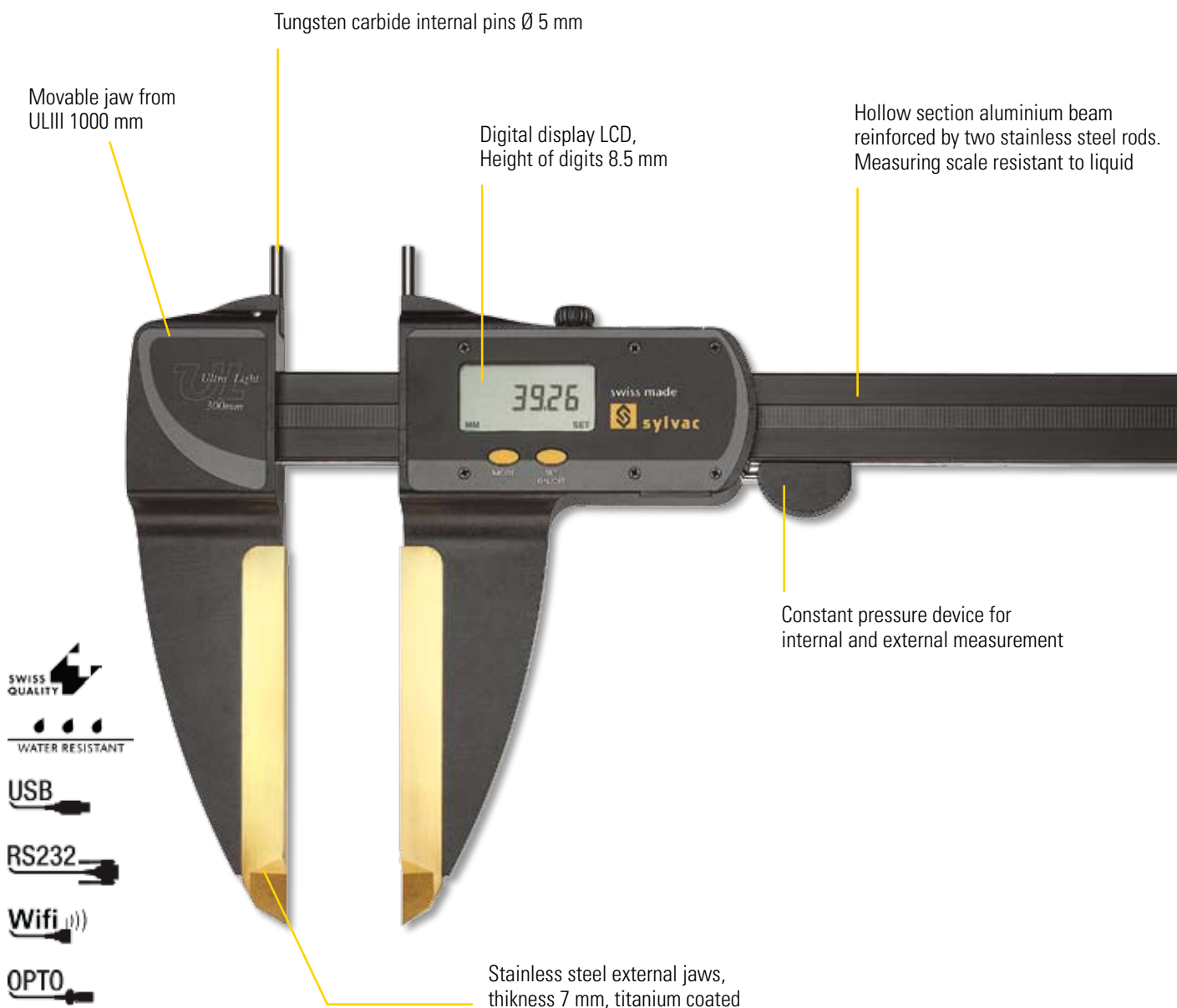
See also cable chapter

Ultra light caliper

S_Cal UL

DESCRIPTION

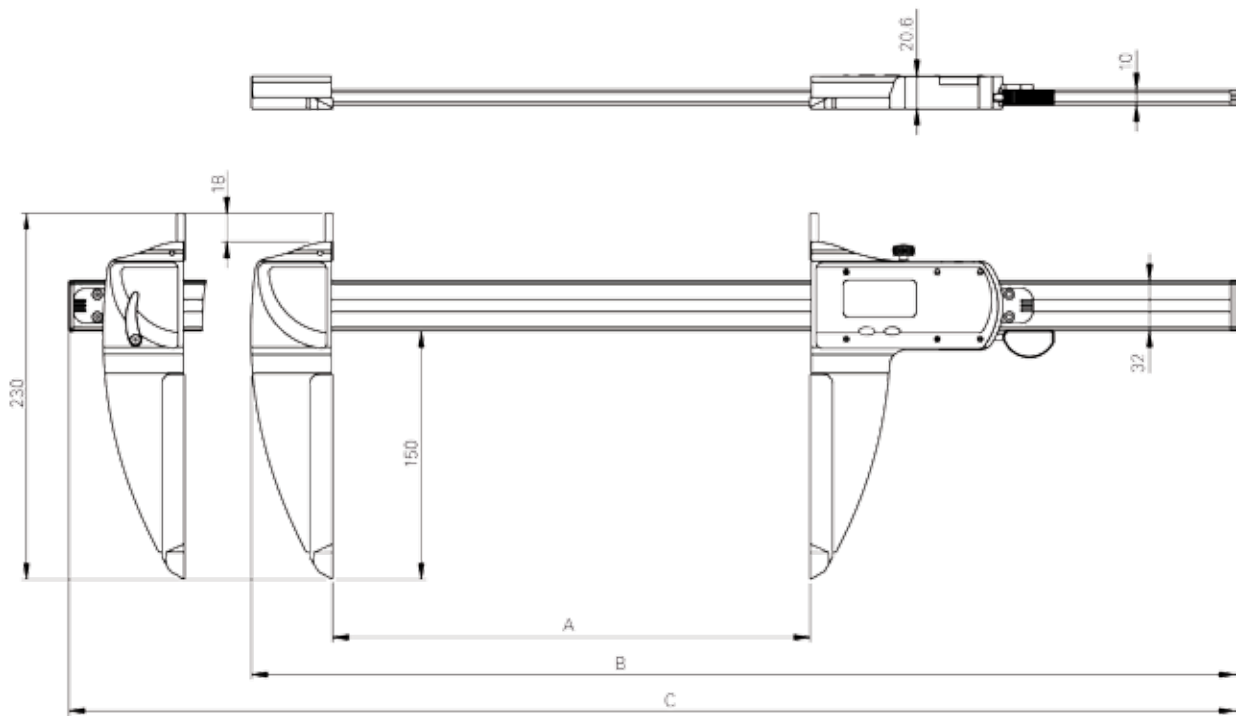
- Self-contained use : 3'300 hours continuously
- Maximum velocity of displacement : 1.55 m/s
- Internal and external measurement
- This system assures a perfect guidance and protects the beam against shocks
- Display the upper and lower tolerances
- Extremely light instrument



Ultra light caliper

S_Cal UL

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		911.1403	911.1406	911.1410	911.1415	911.1420	911.1425	911.1430
Measuring range	mm	300	600	1000	1500	2000	2500	3000
Max.Error	µm	30	40	60	120	150	200	250
Repeatability	µm	20	20	20	20	30	30	30
A	mm	330	630	1025	1525	2040	2545	3050
B fix	mm	618	918	1)	1)	1)	1)	1)
C mobile	mm	1)	1)	1306	1806	2306	2806	3306
Weight	kg	1.1	1.3	1.6	2	2.3	2.6	3
S_Connect : Opto		USB / RS232 / Digimatic / Wireless ²⁾						
Setting by PC					●			
Memory set					●			
2 references					●			
RESET function					●			
Min/Max function					●			
Tolerance limit indicators					●			

¹⁾ on request

²⁾ see cable chapter

Measuring and scribing instrument Calitrace

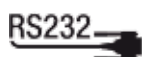
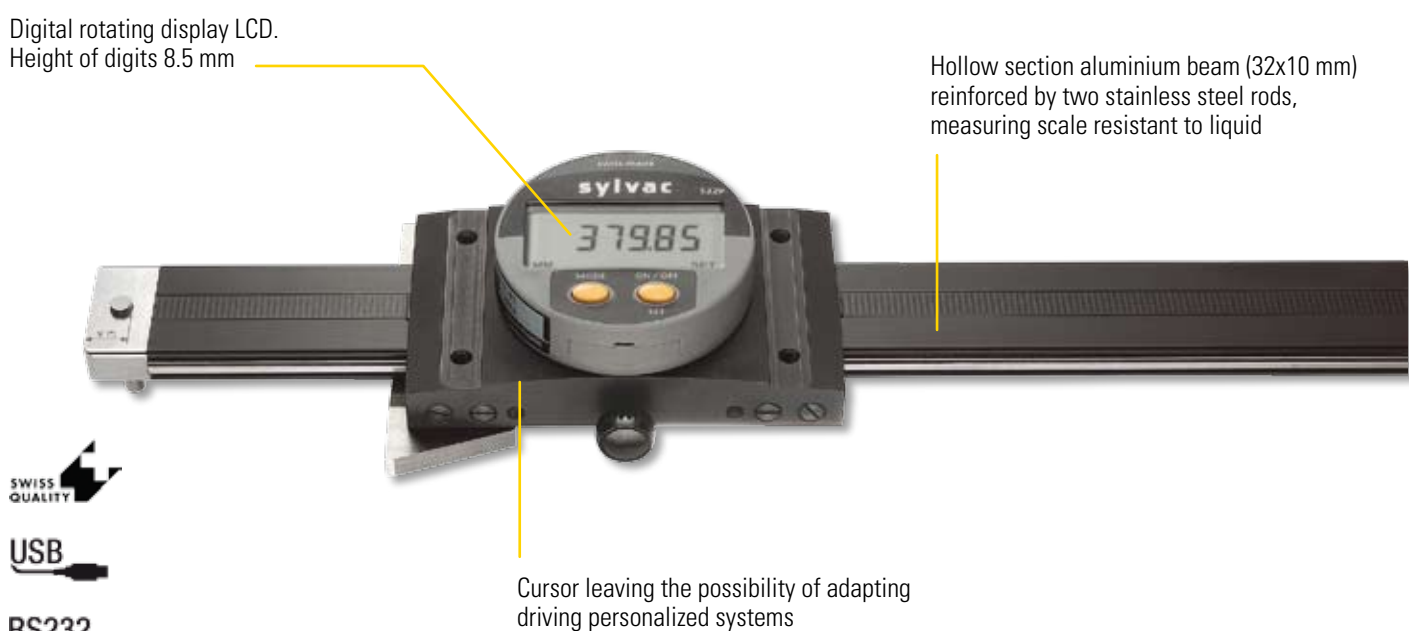
DESCRIPTION

- SYLVAC measuring system patented
- Internal and external measurement with PRESET function
- Self-contained use : 5'000 hours continuously
- Scriber pin in tungsten carbide

Calitrace



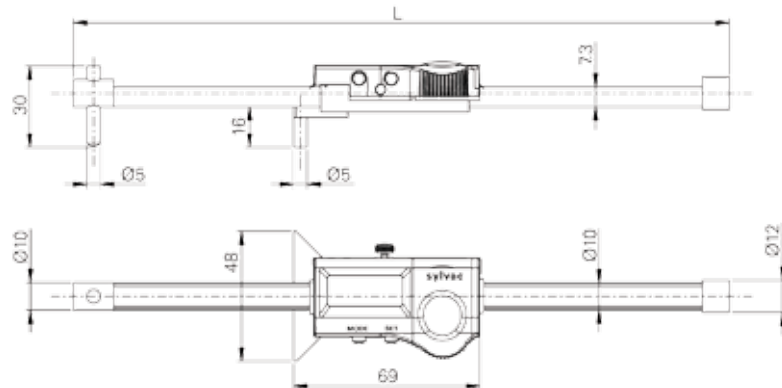
Calitrace UL



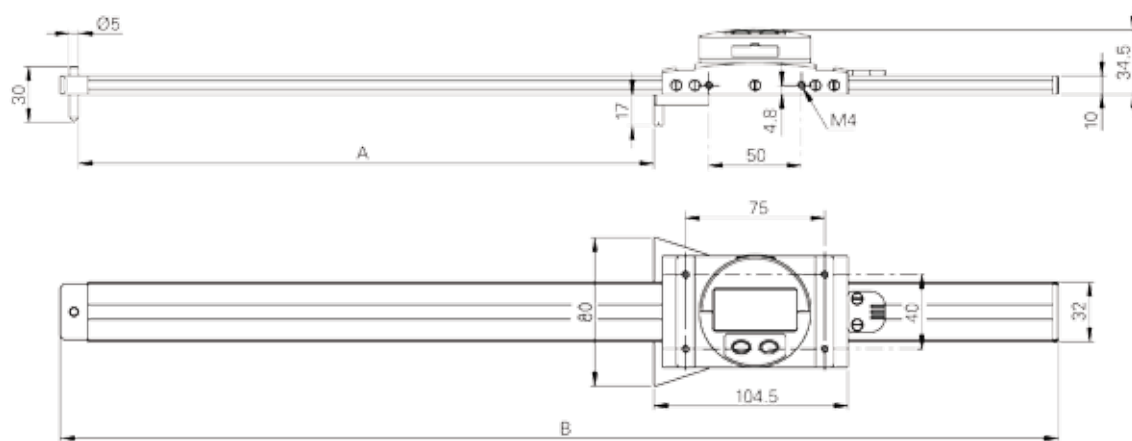
Measuring and scribing instrument Calitrace

DIMENSIONAL DRAWINGS

Calitrace



Calitrace UL



TECHNICAL SPECIFICATIONS

		910.1600	910.1601	910.1602	910.1606	910.1610
Measuring range	mm	150	300	600	600 UL	1000 UL
Max. Error	µm	30	40	50	40	60
Repeatability	µm	10	10	10	20	20
L	mm	243	398	703		
A	mm				615	1020
B	mm				838	1243
S_Connect : Opto		USB / RS232 / Digimatic / Wireless ¹⁾				
2 References				●		
Preset function				●		
Half cylindrical beam Ø 10 mm			●			---
Beam 32 x 10 mm			---			●

¹⁾ see cables chapter

S_Cal UL + Calitrace

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Calibration certificate for ULIII up to 1500

APPLICATIONS



Special S_Cal UL with modified measuring jaws.



Special S_Cal UL with extended measuring jaws.



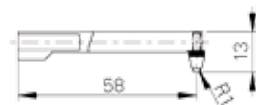
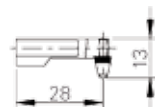
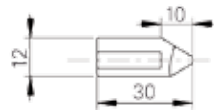
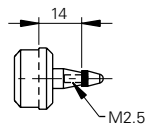
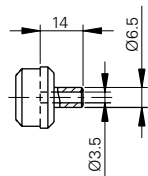
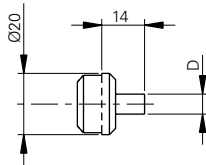
Calitrace



S_Cal UL, movable left jaw

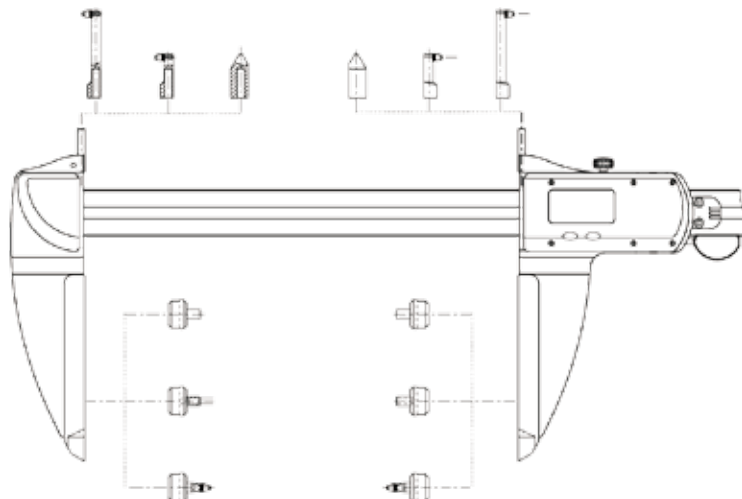
S_Cal UL + Calitrace

ACCESSOIRES



		UL300-3000	Calitrace	Calitrace UL
911.2301	Support Ø 6.35 mm for thread measurement wires in holders, 2x	●		
911.2302	Dito Ø 6.5 mm, 2x	●		
911.2303	Dito Ø 8 mm, 2x	●		
911.2304	Thread anvils holders for thread measurement., 2x	●		
911.2305	Support with int. thread M 2.5 for measuring anvils, 2x	●		
911.2307	Inserts in hardened steel, cone 60° for bore clearance measurement > 10 mm, 2x	●	●	●
911.2308	Holder for dial gauge contact points for internal groove measurement, 2x	●	●	●
911.2309	Dito height 58 mm, 2x	●	●	●

See also cables chapter

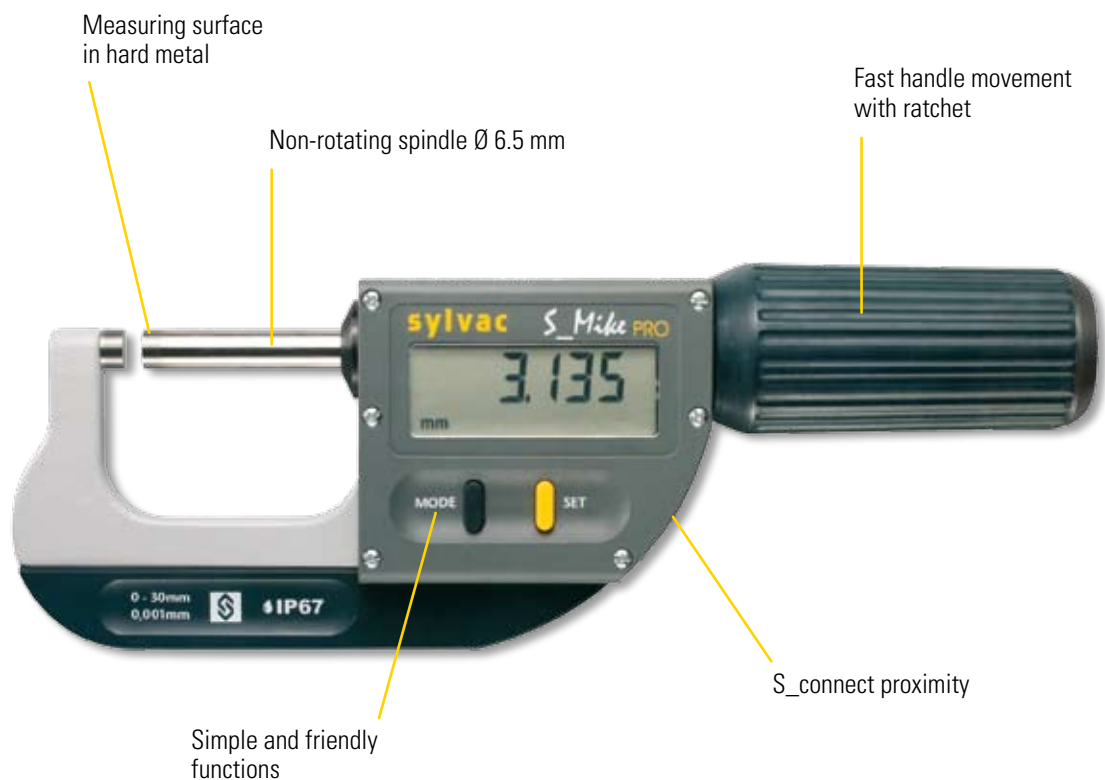


Professional micrometer

S_Mike PRO

DESCRIPTION

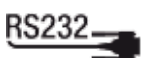
- Automatic wake-up by moving the measuring spindle (system S.I.S)
- Sleeping mode after 20 min. of no use (system S.I.S)
- Position memorized in sleeping mode (system S.I.S)
- Water protected for heavy-duty work with coolants and lubricants, protection rating IP67 according to IEC 60529, with or without connector
- Measuring range 0-102 mm covered with 3 instruments only
- Set of 3 micrometers 0-102 mm available
- Quick displacement of the measuring spindle 12 mm / rotation
- Adjustable measuring force 5N / 10N
- Repeatability and reproducibility unequalled
- Self-contained use: 12'000 hours continuously
- Thimble in Delrin®



SIS | Smart Inductive System



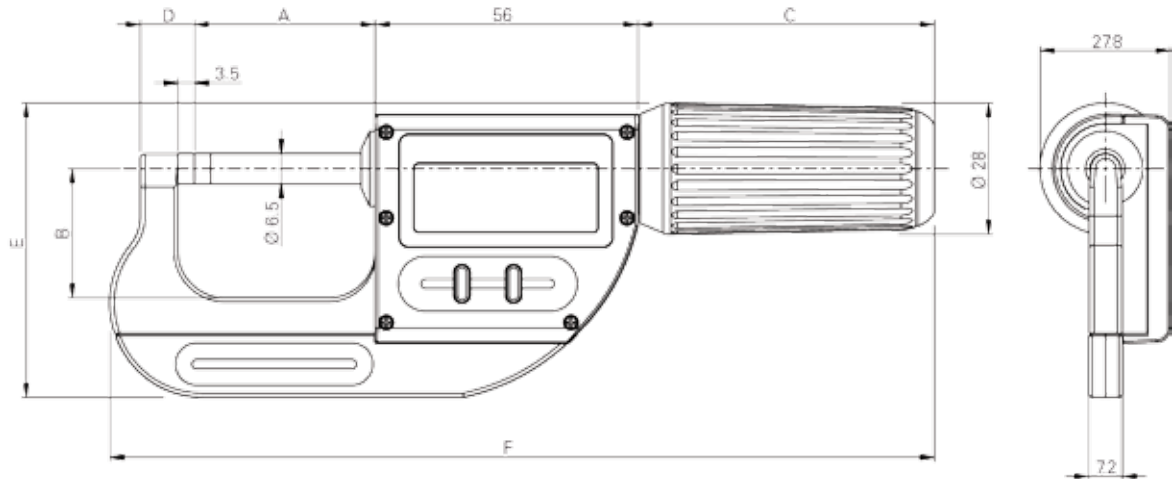
IP67



Professional micrometer

S_Mike PRO

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		903.0300	903.0600	903.1000
Measuring range	mm	0-30	30-66	66-102
Max. Error G ¹⁾	µm	3	4	5
Repeatability ²⁾	µm	1	1	1
A	mm	38.5	74.5	110.5
B	mm	27.5	43	60
C	mm	63	75	75
D	mm	11.5	12.5	13.5
E	mm	63	85	106
F	mm	176	231	270
S_Connect : Proximity		USB / RS 232 / Digimatic / Wireless ³⁾		
Protection rating according to IEC 60529		IP67 with or without connector		
Setting by PC			●	
Adjustable measuring force			●	
Non-rotating spindle			●	
Fast movement			●	
Preset function			●	
Smart Inductive Sensor			●	

¹⁾ according to DIN 863

²⁾ ± 1 digit

³⁾ see cables chapter

Set of 3 micrometers 0-102 mm : 903.1300

Professional micrometer

S_Mike PRO

BASIC INSTRUMENT

- Instrument according to technical specifications
- Master 50 mm (for 903.0600)
- Master 75 mm (for 903.1000)
- Lithium battery CR2302 included
- Manual
- Calibration certificate

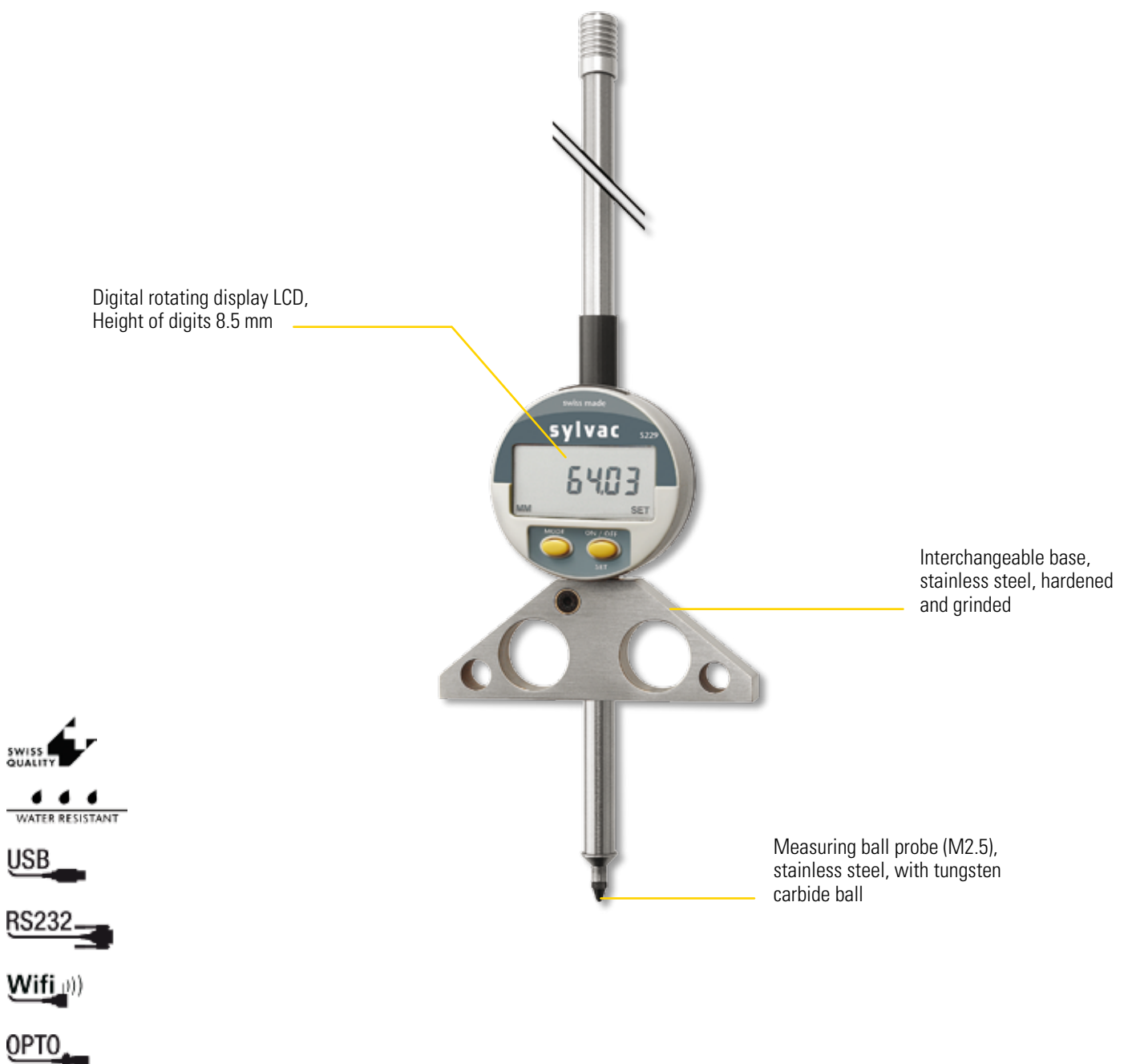
ACCESSORIES

903.0330	Support
903.0620	Setting master 50 mm
903.1020	Setting master 75 mm

Depth gauge

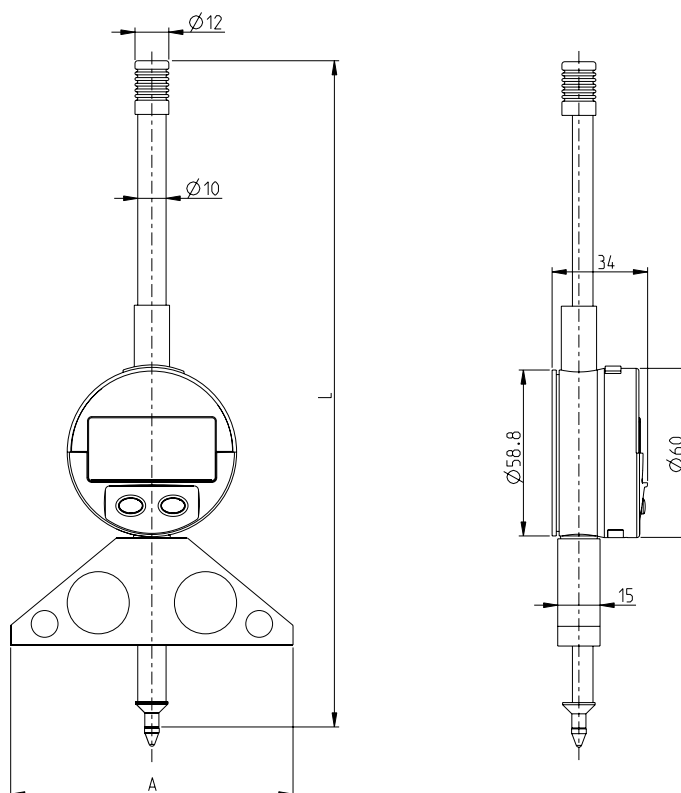
DESCRIPTION

- PRESET function
- Selection of measuring direction
- Self-contained use: 5'000 hours continuously
- Interchangeable base



Depth gauge

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		905.6005	905.6006
Measuring range	mm	300	500
Max. Error	μm	30	40
Repeatability ¹⁾	μm	10	10
A	mm	100	200
L	mm	439	642
S_Connect : Opto	USB / RS232 / Digimatic / Wireless ²⁾		
2 References		●	
PRESET function		●	

¹⁾ ± 1 digit

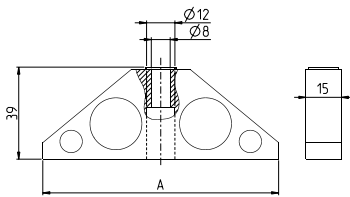
²⁾ see cables chapter

Depth gauge

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual

ACCESSORIES



		A
905.2001	Base	100 mm
905.2002	Base	150 mm
905.2003	Base	200 mm

Special lengths on request.
Interchangeable measuring probe M2.5 (see page 50)

APPLICATIONS



Depth gauge



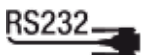
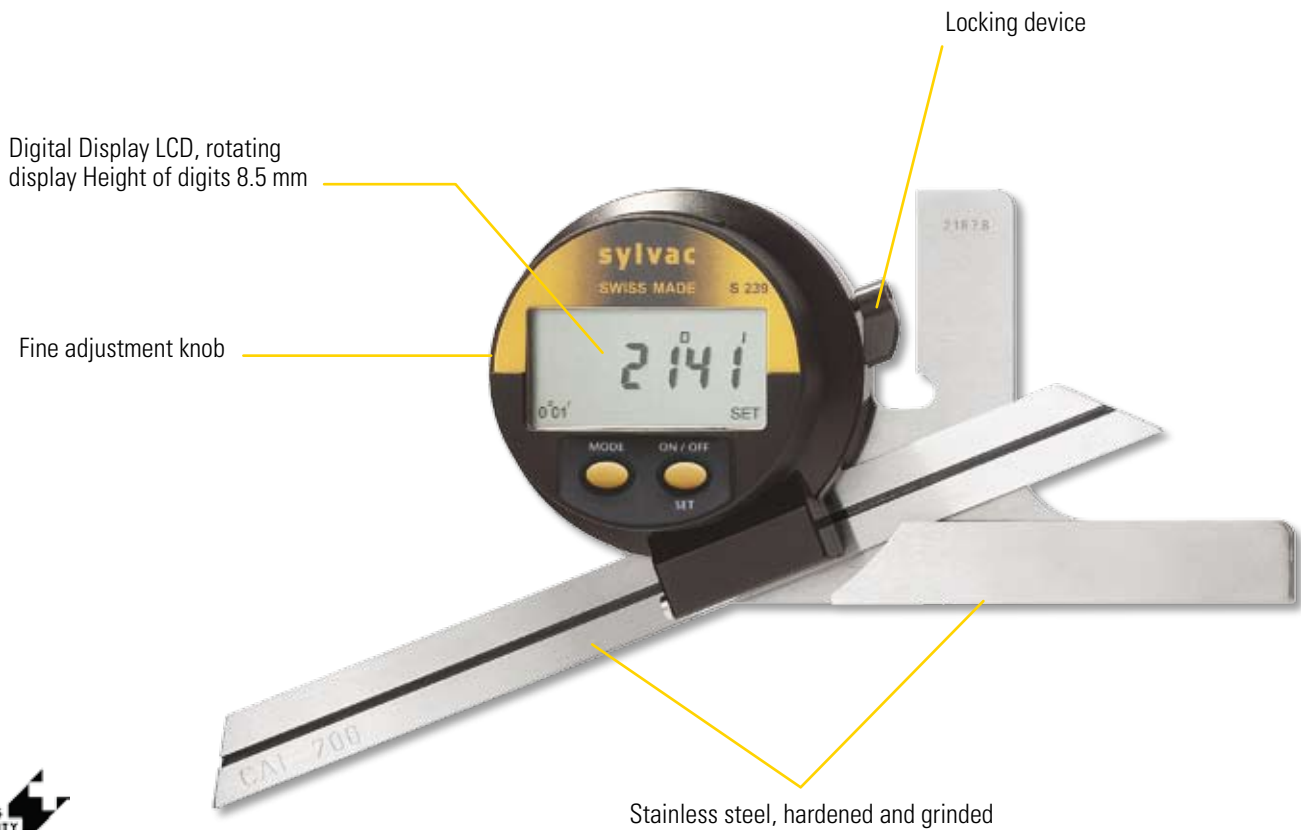
Depth gauge

Protractor

S239

DESCRIPTION

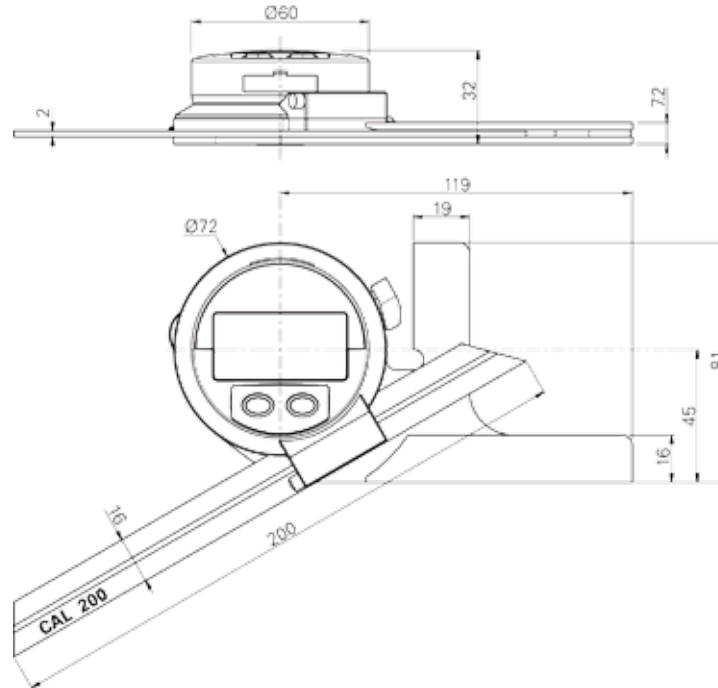
- Measuring range 1x360°, 2x180°, 4x90°
- Mechanical parts in stainless steel
- Self-contained use : 5'000 hours continuously



Protractor

S239

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		820.1700
Measuring range	mm	0-360°
Max. Error		4 minutes of arc
Resolution		1 minute of arc / 0.01°
Max. rotation speed		1080° / sec
Protection rating according to IEC 529		IP51
S_Connect : Opto		USB / RS232 / Digimatic / Wireless ¹⁾
Selection of measuring direction		●

¹⁾ see cables chapter

BASIC INSTRUMENT

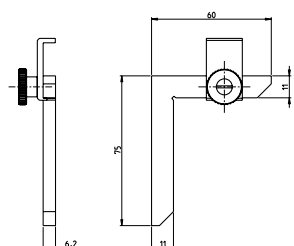
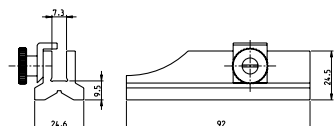
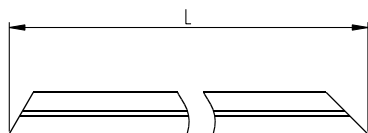
- Instrument according to technical specifications
- Wooden box with 200 mm scale ²⁾
- Scale 200 mm (820.2420)
- Lithium battery CR2302 included
- Manual

²⁾ Fumigated, compatible ISPM 15 and NIMP 15

Protractor

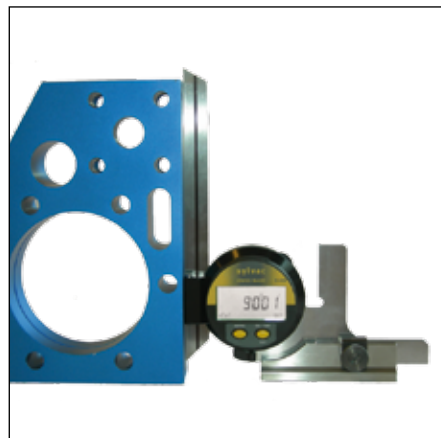
S239

ACCESSORIES



820.2420	Scale L 200 mm
820.2430	Scale L 300 mm
820.2450	Scale L 500 mm
820.2460	Stand for vertical application and small angular measurements
820.2461	Square for small angular measurements

APPLICATIONS



Measurement with accessory type 820.2460



Standard measurement



Measurement with accessory type 820.2461

DIGITAL DIAL GAUGE

The electronic indicators are equipped with an engraved scale, glued on the measuring spindle and a sensor which replaces the gears. The analogic display is transformed into a digital display.

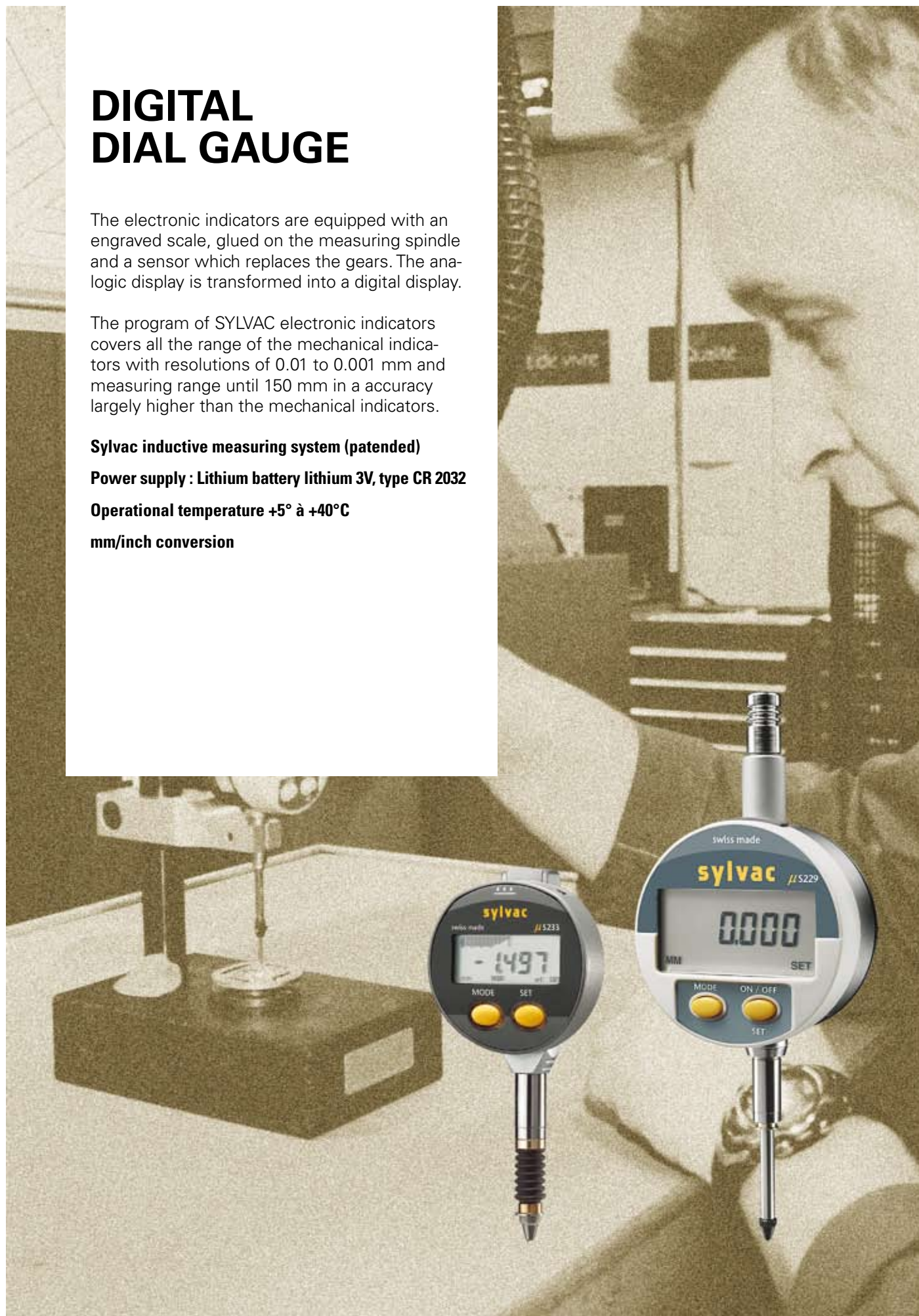
The program of SYLVAC electronic indicators covers all the range of the mechanical indicators with resolutions of 0.01 to 0.001 mm and measuring range until 150 mm in a accuracy largely higher than the mechanical indicators.

Sylvac inductive measuring system (patented)

Power supply : Lithium battery lithium 3V, type CR 2032

Operational temperature +5° à +40°C

mm/inch conversion



Digital indicators

S_Dial

SUMMARY OF ALL TYPES



	S233							S234		
	905.4121	905.4125	905.4140	905.4521	905.4525	905.4540	905.4511	905.4515	905.4321	905.4322
RANGE										
0.5 mm										●
0.8 mm									●	
5 mm			●			●	●	●		
12.5 mm	●	●		●	●					
25 mm										
50 mm										
100 mm										
150 mm										
RESOLUTION										
0.01 mm	●	●	●							
0.001 mm				●	●	●	●	●	●	●
MECANIC										
Diameter 8 mm h6	●	●	●	●	●	●	●	●		
Dove tail	●	●	●	●	●	●	●	●	●	●
M1.4 contact point									●	●
M2.5 contact point	●	●	●	●	●	●	●	●		
Rubber boot		●			●			●		
IP65 (IEC 60529)	●	●	●	●	●	●	●	●	●	●
IP67 (IEC 60529)										
DIAL										
Diameter 44 mm	●	●	●	●	●	●	●	●	●	●
Diameter 60 mm										
Rotating									●	●
Big digits										
Vertical display					●	●				
FUNCTIONS										
mm/inch	●	●	●	●	●	●	●	●	●	●
Preset	●	●	●	●	●	●				
Dynamic preset										
Measuring direction	●	●	●	●	●	●				
Hold	●	●	●	●	●	●				
Min / Max / Delta							●	●	●	●
Tolerances										
Absolute Function (ABS)	●	●	●	●	●	●				
Auto off	●	●	●	●	●	●	●	●	●	●
Analog display							●	●	●	●
Setting by PC										
Powered by connector	●	●	●	●	●	●	●	●	●	●

Digital indicators

S_Dial

SUMMARY OF ALL TYPES

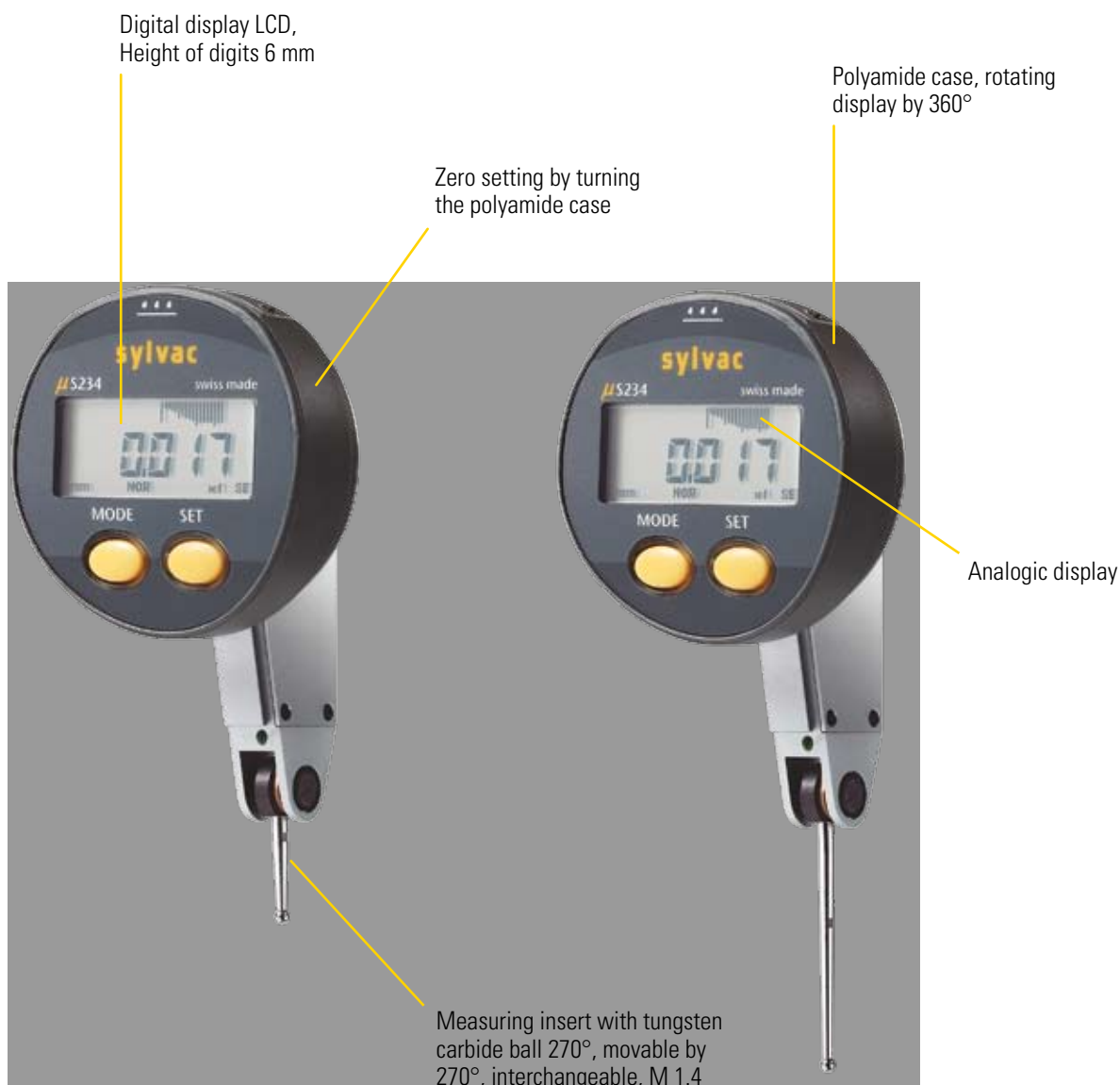
	S229														S213						
	905.1201	905.1205	905.1301	905.1303	905.1305	905.1401	905.1405	905.1501	905.1505	905.1601	905.1621	905.1641	905.1661	905.1671	905.1681	905.5301	905.5302	905.5303	905.5305	905.5501	905.5505
RANGE																					
0.5 mm																					
0.8 mm																					
5 mm																					
12.5 mm	●	●	●	●	●											●	●	●	●		
25 mm						●	●	●	●											●	●
50 mm										●	●										
100 mm												●	●								
150 mm													●	●	●						
RESOLUTION																					
0.01 mm	●	●				●	●			●		●		●							
0.001 mm			●	●	●			●	●		●		●		●	●	●	●	●	●	●
MECHANIC																					
Diameter 8 mm h6	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Dove tail																					
M1.4 contact point																					
M2.5 contact point	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rubber boot		●			●		●		●										●		●
IP65 (IEC 60529)																					
IP67 (IEC 60529)																					
DIAL																					
Diameter 44 mm																					
Diameter 60 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Rotating	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Big digits	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Vertical display																					
FUNCTIONS																					
mm/inch	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Preset	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
Dynamic preset																	●				
Measuring direction	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Hold	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Min / Max / Delta																●	●	●	●	●	●
Tolerances																●	●	●	●	●	●
Absolute Function (ABS)																					
Auto off																					
Analog display																					
Setting by PC																●	●	●	●	●	●
Powered by connector																					

Test indicator

S_Dial S234

DESCRIPTION

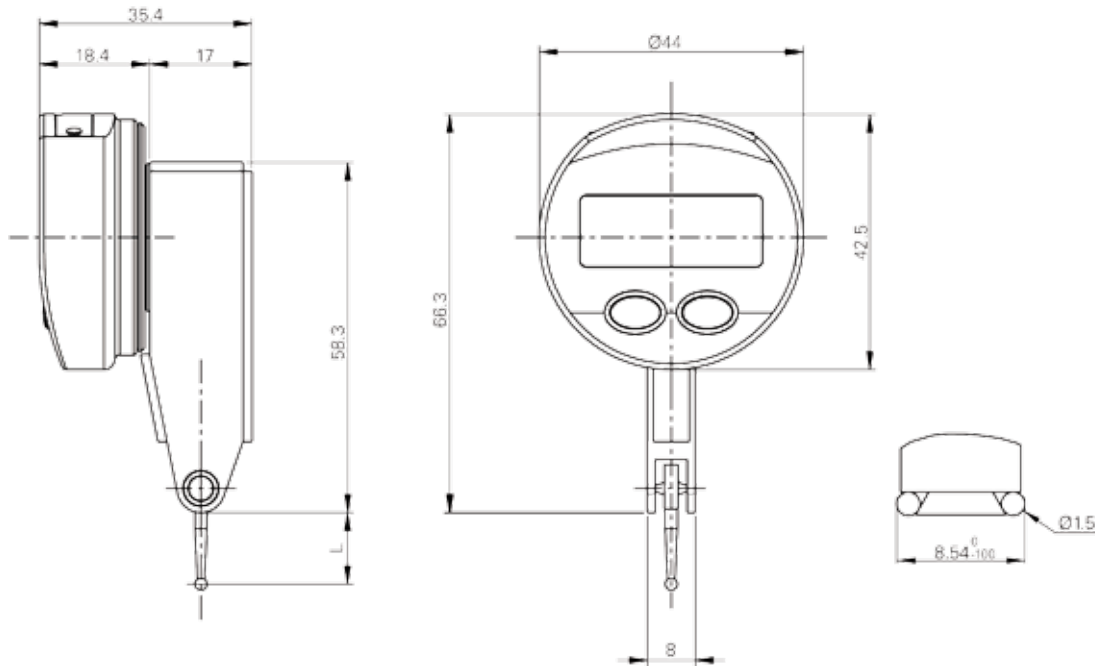
- Digital and analogic display
- Water and coolant resistant
- Data output RS 232 combined with external power
- Self-contained use : 5'000 hours continuously
- Automatic switch OFF
- Delivered with Stem Ø 8 mm and dovetail back
- Rotating display by 360°



Test indicator

S_Dial S234

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		905.4321	905.4322
Measuring range	mm	0.8	0.5
Probe length	mm	12.5	36
Max Error fe	µm	10	10
Hysteresis fu	µm	3	3 ¹⁾
Resolution	mm	0.001	0.001
Repeatability	µm	1	1
Measuring force	N	0.13 ±15%	0.07 ±15%
Weight		75	75
Protection rating according to IEC 60529		IP65	
S_Connect : Power		USB / RS232 / Digimatic / Wireless ²⁾	
Zero setting		●	
min / max / delta display		●	
Analog scale range ratio		●	
Selection of resolution		●	

¹⁾ ± 1 digit

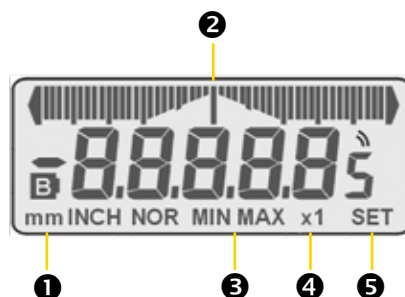
²⁾ see cables chapter

Test indicator

S_Dial S234

DISPLAY

- ① Direct mm/inch conversion
- ② Analog display
- ③ Min/max/delta mode
- ④ Analogic resolution display
- ⑤ Zero setting



BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Stem Ø 8 mm

APPLICATIONS



Run-out measurement



Checking the alignment of a vice on milling machine.

Mini-dial gauge

S_Dial S233

DESCRIPTION

- Compact, small diameter
- Water and coolant resistant, protection rating IP65 according to IEC 60529
- Data output RS 232 combined with external power supply.
- Interchangeable contact point M2.5
- Clamping Stem $\varnothing$ 8-h6 in hardened and ground stainless steel and dovetail back
- Self-contained use: 5'000 hours continuously
- Automatic power shut down

Standard

Analogic

Vertical

Polyamide case,
fixed display

Digital display LCD,
Height of digits 6 mm



Stainless steel measuring
pin, grinded

Fixing $\varnothing$ 8-h6

Interchangeable contact point,
stainless steel with TC ball

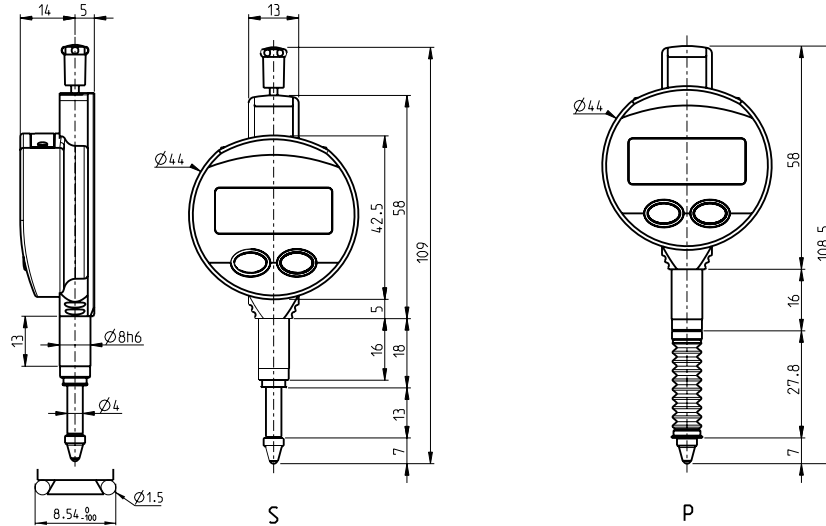
Rubber boot on
protected version

Mini-dial gauge

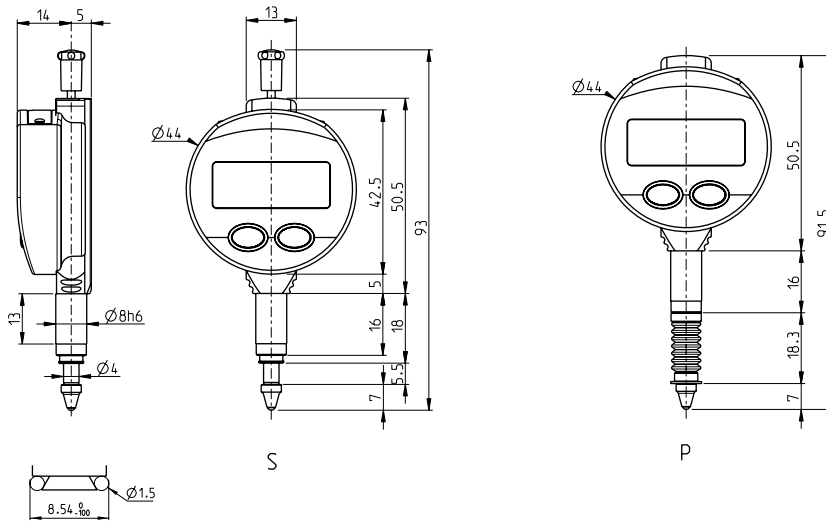
S_Dial S233

DIMENSIONAL DRAWINGS

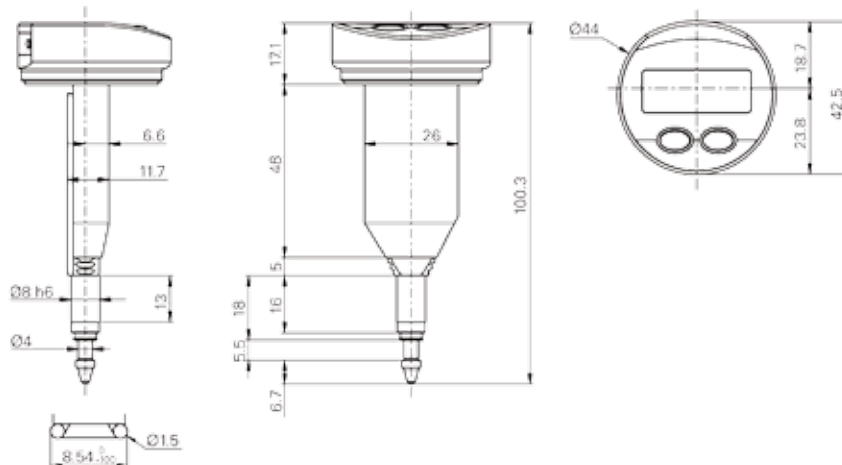
Standard



Analogic



Vertical



S = standard

P = protected

Mini-dial gauge

S_Dial S233

TECHNICAL SPECIFICATIONS

		905.4140	905.4540	905.4511	905.4515
Measuring range	mm	5	5	5	5
Display 90°		●	●	---	---
Analogic scale		---	---	●	●
Resolution	mm	0.01	0.001	0.001	0.001
Execution ³⁾		S	S	S	P
Max. Error fe	μm	10 ¹⁾	5	4	4
Repeatability	μm	2	2	2	2
Measuring force	N	0.50 - 0.65 ²⁾	0.50 - 0.65 ²⁾	0.50 - 0.65 ²⁾	0.60 - 1.20 ²⁾
Zero setting		●	●	●	●
REL and ABS measurement		●	●	---	---
Resolution selection		---	●	●	●
PRESET = (max. 130 mm)		●	●	---	---
Min / max / delta display		---	---	●	●
Selection of measuring direction		●	●	---	---
S_Connect : Power		USB / RS232 / Digimatic / Wireless ⁴⁾			

		905.4121	905.4125	905.4521	905.4525
Measuring range	mm	12.5	12.5	12.5	12.5
Résolution	mm	0.01	0.01	0.001	0.001
Execution ³⁾		S	P	S	P
Max. Error fe	μm	10 ¹⁾	10 ¹⁾	5	5
Repeatability	μm	2	2	2	2
Resolution selection		---	---	●	●
S_Connect : Power		USB / RS232 / Digimatic / Wireless ⁴⁾			
Zero setting				●	
REL and ABS measurement				●	
PRESET = (max. 130 mm)				●	
Selection of measuring direction				●	

¹⁾ ± 1 digit

²⁾ Values ± 20%, indicator in vertical position, outgoing measuring spindle

³⁾ S = Standard P = Protected

⁴⁾ see cables chapter

Mini-dial gauge

S_Dial S233

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Calibration certificate for instruments with resolution of 0.001 mm

MEASURING FORCE FOR RANGE 12.5 mm

	S	P
Standard	0.5 - 0.90 N	0.6 - 1.3 N
Low ¹⁾	0.35 - 0.50 N	---
High ¹⁾	1.80 - 2.3 N	---

The values get along to $\pm 20\%$, indicator in vertical position, spindle in outgoing measurement position.

¹⁾ on request

APPLICATIONS



Checking of an internal $\varnothing$ with a mechanical head



Measure of the vertical displacement of an element



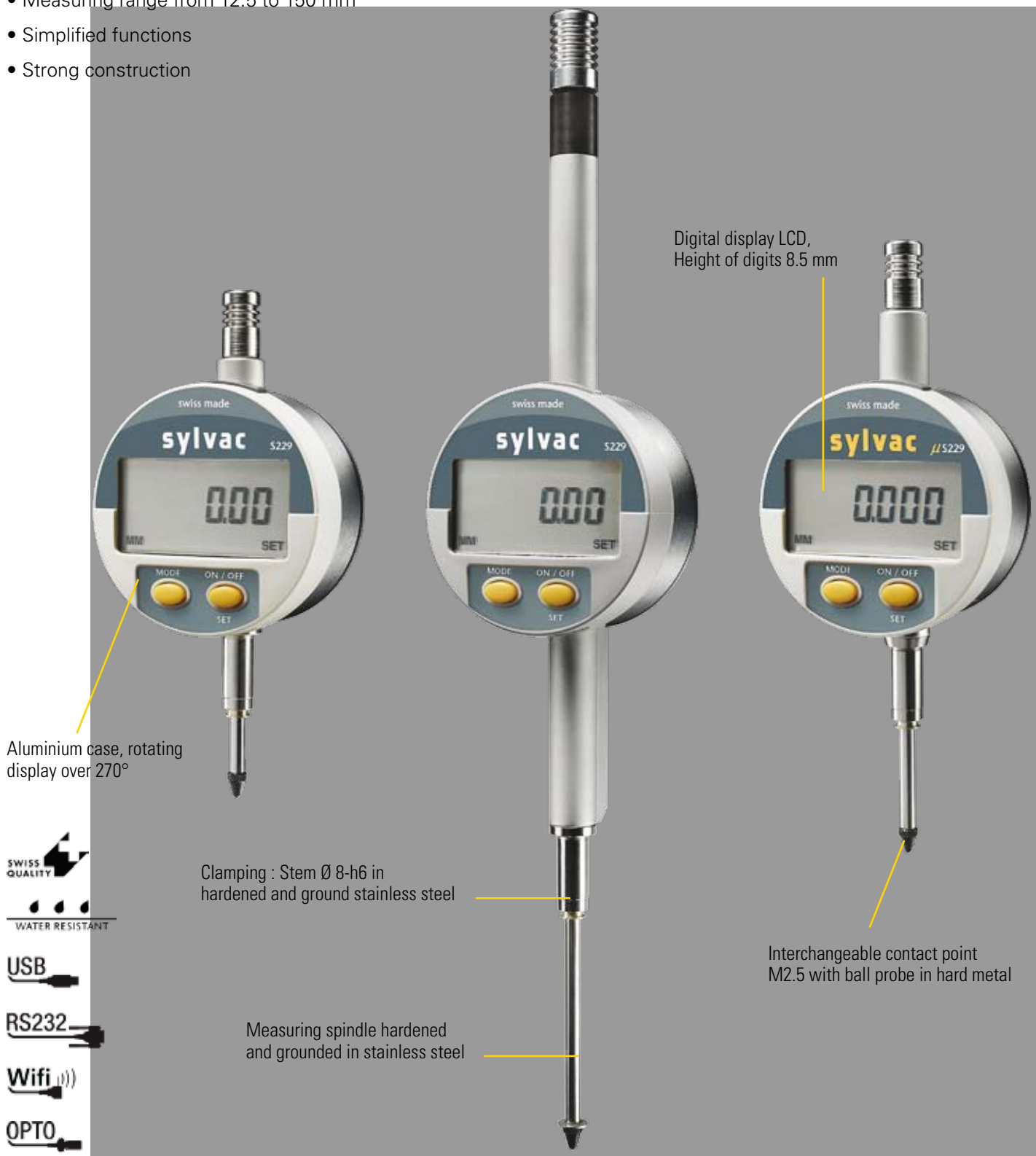
Alignment of a machine element

Dial gauge

S_Dial S229

DESCRIPTION

- Data output Opto-RS232 or Opto-USB
- Self-contained use : 4400 hours continuously
- Measuring range from 12.5 to 150 mm
- Simplified functions
- Strong construction



Dial gauge

S_Dial S213

DESCRIPTION

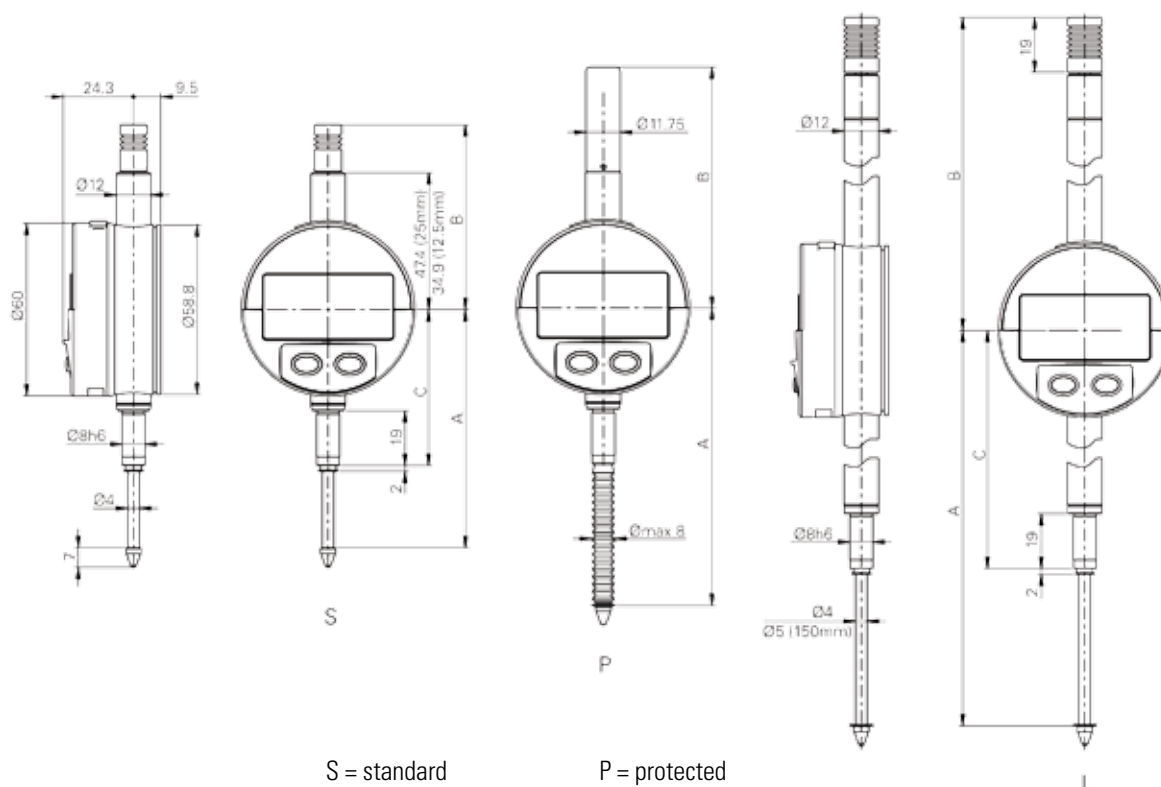
- Construction identical to the S229 version
- Data output Opto-RS232 or Opto-USB
- Self-contained use : 3300 hours continuously
- Min / max / delta values
- Selection and display of tolerances
- Programmable by PC
- Dynamic PRESET on type int /Ext (recall of the preset on value min/max memorized)



Dial gauges

S_Dial S229 + S213

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

	S229	S213	Int / Ext
Zero setting	●	●	
Memory Set HOLD	●	●	●
2 references	●	●	●
PRESET	●	●	on min/max
Selection of measuring direction	●	●	●
Min / max / delta values	---	●	●
Selection and display of tolerances.	---	●	---
PRESET recall on min, max memorized value	---	---	●
Programmable by PC	---	●	●
S_Connect : Opto	RS232 / USB / Digimatic / Wireless ¹⁾		

¹⁾ see cables chapter

Dial gauges

S_Dial S229 + S213

TECHNICAL SPECIFICATIONS

	905.1201	905.1205	905.1301	905.1303	905.1305	905.5301	905.5303	905.5305
Measur. range mm	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Version	S229	S229	S229	S229	S229	S213	S213	S213
Execution ²⁾	S	P	S	S	P	S	S	P
Resolution mm	0.01	0.01	0.001	0.001	0.001	0.001	0.001	0.001
Max. Error fe μm	10 ¹⁾	10 ¹⁾	5	3	5	5	3	5
Repeatability μm	2	2	2	2	2	2	2	2
A mm	66	78.5	66	66	78.5	66	66	78.5
B mm	54	60	54	54	60	54	54	60
C mm	50.5	50.5	50.5	50.5	50.5	50.5	50.5	50.5

	905.1401	905.1405	905.1501	905.1505	905.5501	905.5505	905.5302
Measur. range mm	25	25	25	25	25	25	12.5
Version	S229	S229	S229	S229	S213	S213	Int / Ext
Execution ²⁾	S	P	S	P	S	P	S
Resolution mm	10 ¹⁾	10 ¹⁾	5	5	5	5	5
Max. Error fe μm	0.01	0.01	0.001	0.001	0.001	0.001	0.001
Repeatability μm	2	2	2	2	2	2	2
A mm	82.5	102.5	82.5	102.5	82.5	102.5	66
B mm	64	83.5	64	83.5	64	83.5	54
C mm	53.9	53.9	53.9	53.9	53.9	53.9	50.5

	905.1601	905.1621	905.1641	905.1661	905.1671	905.1681
Measur. range mm	50	50	100	100	150	150
Version	S229	S229	S229	S229	S229	S229
Execution ²⁾	S	S	S	S	S	S
Resolution mm	20 ¹⁾	7	20 ¹⁾	8	20 ¹⁾	9
Max. Error fe μm	0.01	0.001	0.01	0.001	0.01	0.001
Repeatability μm	2	2	2	2	2	2
A mm	142.5	142.5	244.5	244.5	351.5	351.5
B mm	121	121	172	172	223	223
C mm	88	88	139	139	194	194

¹⁾ ± 1 digit

²⁾ S = Standard P = Protected

Dial gauges

S_Dial S229 + S213

MEASURING FORCE

		S 12.5	P 12.5	S 25	P 25	S 50	S 100	S 150
Standard	N	0.65 - 0.90	0.65 - 1.40	0.65 - 1.15	1.00 - 2.25	1.25 - 2.7	1.6 - 3.5	2.2 - 5.7
Low ¹⁾	N	0.4 - 0.55	---	0.45 - 0.9	---	---	---	---
High ¹⁾	N	1 - 1.6	---	0.9 - 1.80	---	---	---	---

The values get along to $\pm 20\%$, spindle in outgoing measurement position.

¹⁾ on request

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Calibration certificate for instruments with a resolution of 0.001 mm

APPLICATIONS



Measure of a groove with a S213 and measuring ball probe 905.2207



Indicator S229, range 150 mm on stand



Use of S213 with a small measuring bench Sylvac PS15

Dial gauges

S_Dial S229 + S213

LIFTING DEVICES



Lower lifting lever, type 905.4214



Upper lifting lever type, 905.4215



Pneumatic lifting device type 905.2218



Lifting lever type 905.2214



Vacuum lifting device type 905.2220



Lifting device with photo-cable type 905.2216



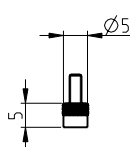
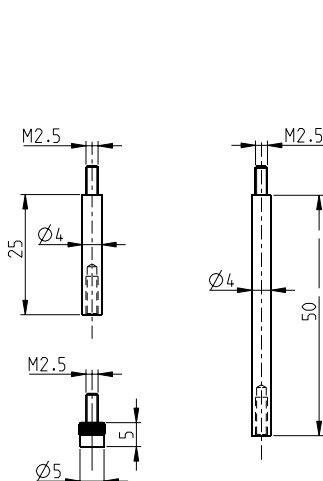
Upper lifting lever type 905.2215

Dial gauge

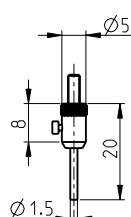
S_Dial

ACCESSORIES

Measuring probe M2.5



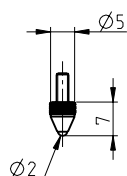
905.2201



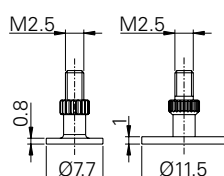
905.2202



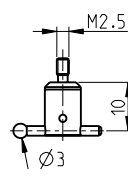
905.2203



905.2204



905.2205

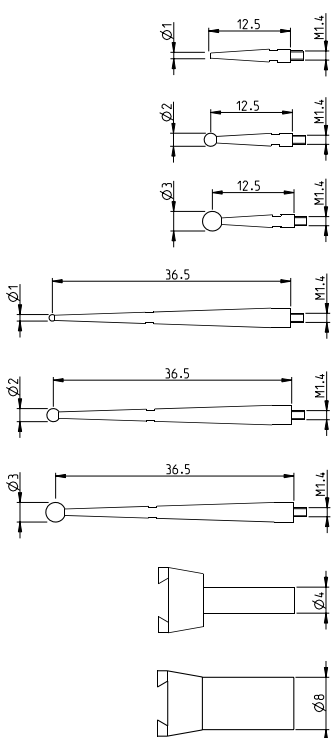


905.2207

905.2206

S233
S234
S229 12,5 - 25 mm
S229 50 - 150 mm
S213 12,5 - 25 mm

●		●	●	●
●		●	●	●



905.2240

Short probe, TC ball

905.2241

Short standard probe, TC ball

905.2242

Short probe, TC ball

905.2243

Long probe, TC ball

905.2244

Long standard probe, TC ball

905.2245

Long probe, TC ball

905.2246

Clamping stem

905.2247

Clamping stem

905.2248

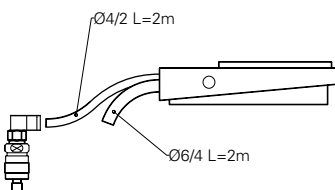
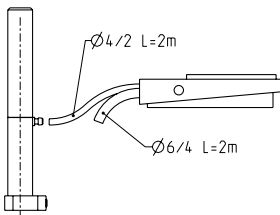
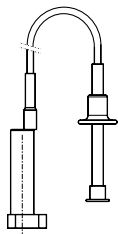
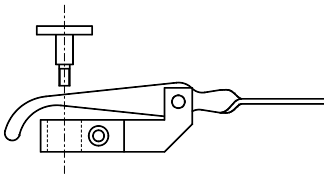
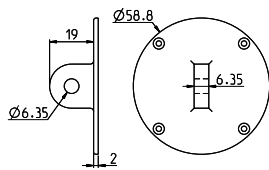
Spanner for probe

	●			
	●			
	●			
	●			
	●			
●	●			
●	●			
	●			

Dial gauges

S_Dial

ACCESSORIES

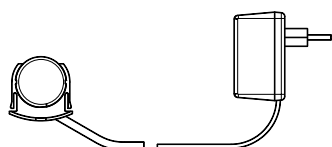
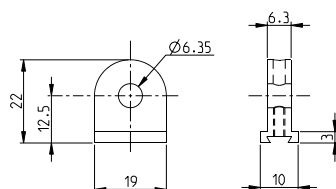
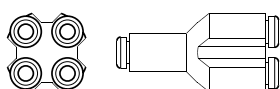
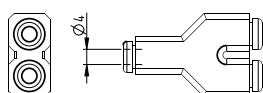
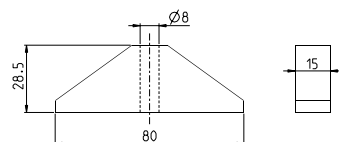
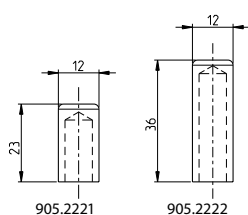


		S233	S234	S229 12,5 - 25 mm	S229 50 - 150 mm	S213 12,5 - 25 mm
905.2211	Centre lug back			●	●	●
905.2214	Lifting device			●	●	●
905.2215	Upper lifting device			●		●
905.2216	Lifting device with photo-cable			●		●
905.2218	Pneumatic lifting device with foot pedal			●		●
905.2217	Lifter only for 905.2218			●		●
905.2219	Pneumatic foot pedal for 905.2218	●		●		●
905.2220	Vacuum lifting device with foot pedal				●	
905.2227	Pressure controller for 905.2220				●	
905.2228	Vacuum foot pedal for 905.2220				●	

Dial gauges

S_Dial

ACCESSORIES

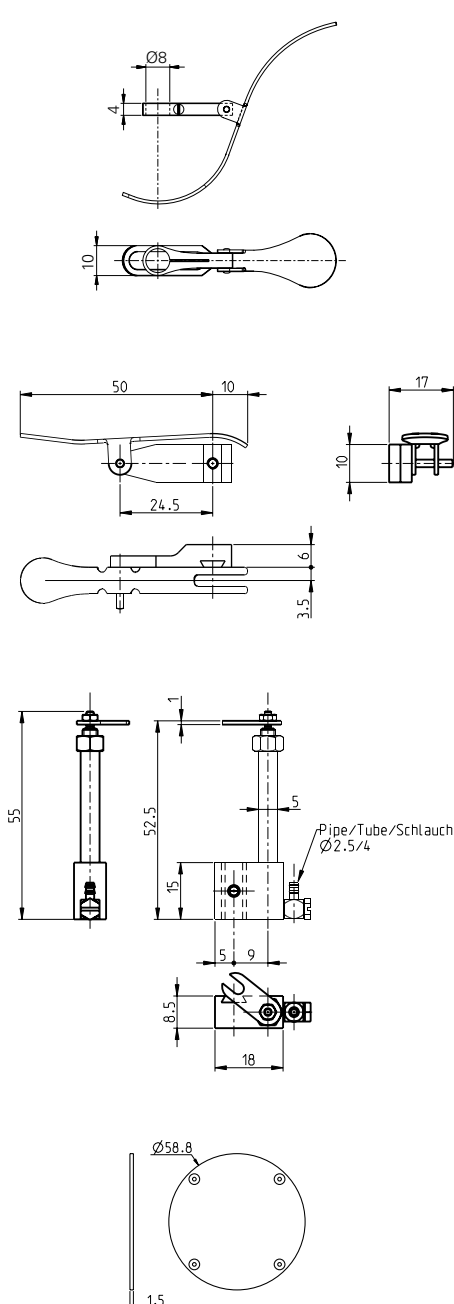


		S233	S234	S229 12,5 - 25 mm	S229 50 - 150 mm	S213 12,5 - 25 mm
905.2221	Dust protection for indicator, range 12.5 mm			●		●
905.2222	Dust protection for indicator, range 25 mm			●		●
905.2223	Depth measuring base See also page 29			●	●	●
905.2230	Protection for front face			●	●	●
905.2261	Snap connector for pneumatic lifter x 2	●		●	●	●
905.2262	Snap connector for pneumatic lifter x 4	●		●	●	●
905.4211	Centre lug back	●	●			
926.5516	External power supply			●	●	●

Dial gauges

S_Dial

ACCESSORIES

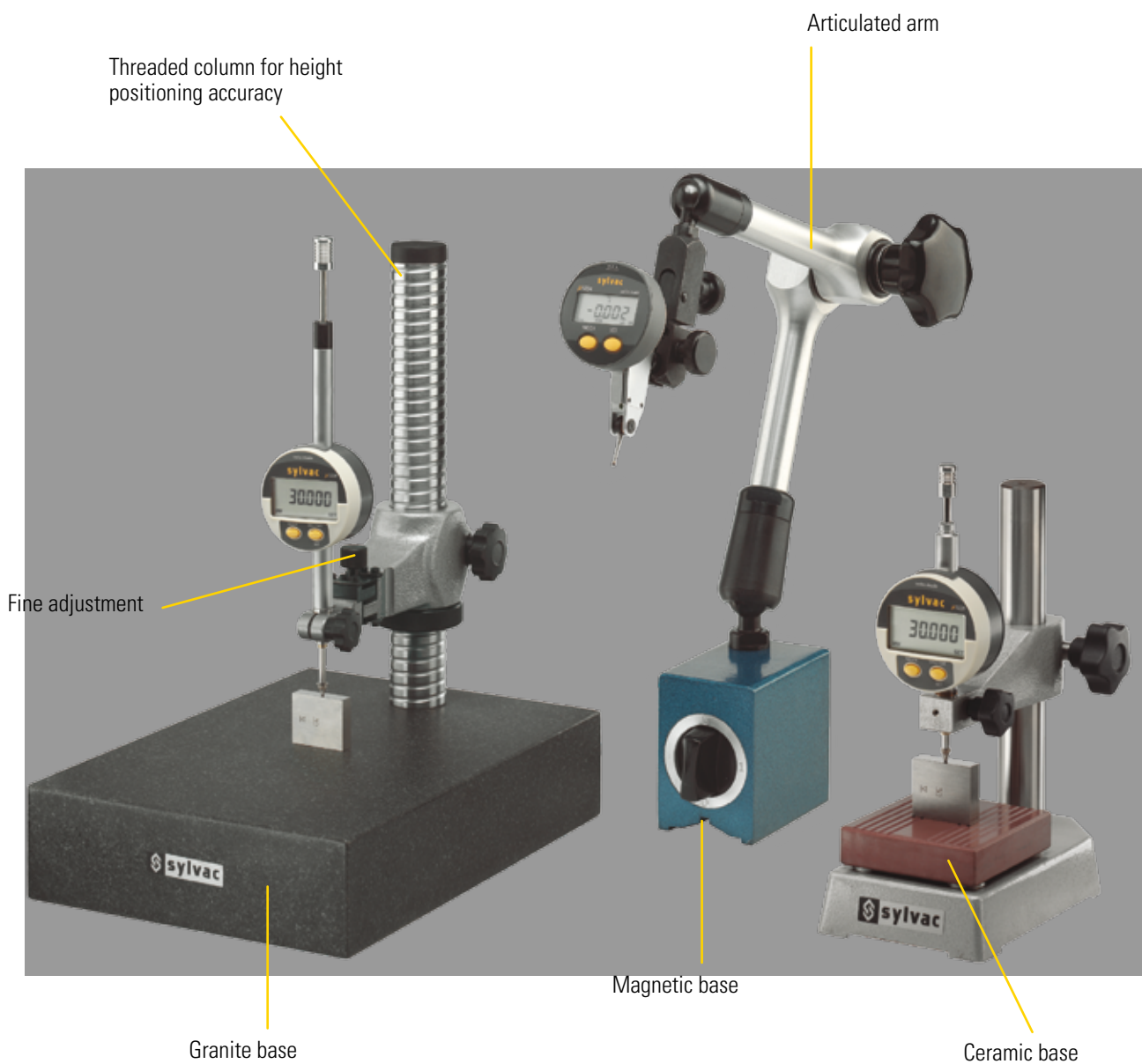
		S233	S234	S229 12,5 - 25 mm	S229 50 - 150 mm	S213 12,5 - 25 mm
	905.4214 Lower lifting device, range 12.5 mm	●		1)	1)	1)
	905.4215 Upper lifting device for S (Standard) execution, except vertical type	●				
	905.4217 Pneumatic lifting device for standard type	●				
	905.2210 Flat back			●	●	●

¹⁾ used on range 20 mm max

Measuring stands

DESCRIPTION

- A selection of universal measuring stands for fixing all probes, test indicators and dial gauges
- Clamping on Ø 8 mm or dovetail on magnetic stand



Measuring stands

TECHNICAL SPECIFICATIONS



908.1201



908.1206



908.1209



908.1203



908.1204

	908.1201	908.1206	908.1209	908.1203	908.1204
Base	magnetic ¹⁾	granite grade 00	cast iron, ceramic table	granite grade 00	granite grade 00
Base dimensions	70x46x65 mm	100x150x40 mm	85x85x25 mm	240x140x50mm	300x210x60
Central locking	1 handle	---	---	---	---
Column	---	Steel Ø 20 mm	Chr.st. Ø 25 mm	Hard Chr. Ø 35 mm	Hard Chr. Ø 35 mm
Clamping dimension	Ø 8 mm	Ø 8 mm	Ø 8 mm	Ø 8 mm	Ø 8 mm
Dist. Column.-meas. point.	---	60 mm	78 mm	67 mm	100 mm
Measuring range	---	0 - 170 mm	0 - 115 mm	0 - 150 mm	0 - 210 mm
Total height	430 mm	240 mm	215 mm	280 mm	360 mm
Weight	2.2 kg	2.6 kg	4.3 kg	8 kg	16 kg
Fine adjustment	---	---	---	●	●

¹⁾ Gripping coefficient : 600N

INTERNAL MEASURING INSTRUMENTS

SYLVAC offers a large range of measuring internal instruments made up of interchangeable mechanical heads of 2 or 3 points, electronic units with digital display, integrated in the micrometer bodies or pistol grip guaranteeing a sure and fast measurement.

The measuring range goes from 2 to 300 mm in the XTreme type and from 1 to 310 mm in the Ultima type. Special executions are manufactured on request.

Sylvac inductive measuring system (patented)

Power supply : Lithium battery 3V, type CR 2032

Operational temperature +5° à +40°C

Repetability : 2 µm



Bore gauges

Xtreme

DESCRIPTION

- Great measuring range (2 - 300 mm)
- Blind bore measurement from 2 to 6 mm and from 12.5 mm
- Fixed anvils
- UKAS certificate included with all rings
- UKAS certificate included with each instrument
- Manufactured according to DIN863
- Memorization of 3 ring gauges values
- Water and coolant resistant, protection rating IP65 according to IEC 60529
- Programmable by PC
- Self-contained use : 3'300 hours continuously
- S_Connect Power : RS232 / USB / Digimatic / Wireless

X_Treme XTD



X_Treme XTH



Bore gauges

Xtreme

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XTD

	950.1006	950.1007	950.1008	950.1009	950.1010	950.1011	950.1012	950.1013
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12.5
Type	XTD1	XTD2	XTD3	XTD4	XTD5	XTD6	XTD8	XTD10
Depth	9	9	12	18	18	58	58	58
Max. Error μm	4	4	4	4	4	4	4	4
Ø Incl. ring mm	2.5	2.5	4.0	4.0	5.0	8.0	8.0	12.5

	950.1014	950.1015	950.1016	950.1017	950.1018	950.1019	950.1020	950.1021
Meas. range mm	12.5-16	16-20	20-25	25-35	35-50	50-65	65-80	80-100
Type	XTD12.5	XTD16	XTD20	XTD25	XTD35	XTD50	XTD65	XTD80
Depth	62	62	66	66	80	80	80	100
Max. Error μm	4	4	4	4	4	5	5	5
Ø Incl. ring mm	12.5	20.0	20.0	35.0	35.0	65.0	65.0	80.0

	950.1022	950.1023	950.1024	950.1025	950.1026	950.1027	950.1028	950.1029
Meas. range mm	100-125	125-150	150-175	175-200	200-225	225-250	250-275	275-300
Type	XTD100	XTD125	XTD150	XTD175	XTD200	XTD225	XTD250	XTD275
Depth	115	115	115	115	118	118	118	118
Max. Error μm	6	6	7	7	8	8	9	9
Ø Incl. ring mm	125.0	125.0	175.0	175.0	225.0	225.0	275.0	275.0

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS SXTD

	951.1102	951.1103	951.1104	951.1105	951.1106	951.1107	951.1108	951.1109
Meas. range mm	2-6	6-10	10-20	20-50	50-100	100-150	150-200	100-200
Type	SXTD1	SXTD3	SXTD4	SXTD5	SXTD6	SXTD7	SXTD8	SXTD9
Number of heads	5	2	3	3	3	2	2	4
Numb. of rings μm	3	1	2	2	2	1	1	2
Meas. Force mm	8N	7N	15N	21N	28N	32N	32N	32N



Bore gauges

Xtreme

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XTH

	954.1006	954.1007	954.1008	954.1009	954.1010	954.1011	954.1012	954.1013
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12.5
Type	XTH1	XTH2	XTH3	XTH4	XTH5	XTH6	XTH8	XTH10
Depth	9	9	12	18	18	58	58	58
Max. Error μm	4	4	4	4	4	4	4	4
$\varnothing$ Incl. ring mm	2.5	2.5	4.0	4.0	5.0	8.0	8.0	12.5

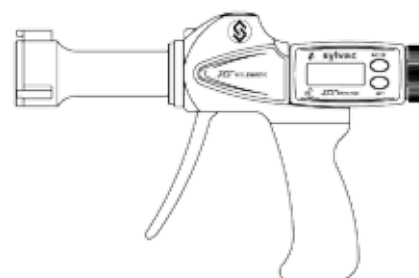
	954.1014	954.1015	954.1016	954.1017	954.1018	954.1019	954.1020	954.1021
Meas. range mm	12.5-16	16-20	20-25	25-35	35-50	50-65	65-80	80-100
Type	XTH12.5	XTH16	XTH20	XTH25	XTH35	XTH50	XTH65	XTH80
Depth	62	62	66	66	80	80	80	85
Max. Error μm	4	4	4	4	4	5	5	5
$\varnothing$ Incl. ring mm	12.5	20.0	20.0	35.0	35.0	65.0	65.0	80.0

	954.1022	954.1023	954.1024	954.1025	954.1026	954.1027	954.1028	954.1029
Meas. range mm	100-125	125-150	150-175	175-200	200-225	225-250	250-275	275-300
Type	XTH100	XTH125	XTH150	XTH175	XTH200	XTH225	XTH250	XTH275
Depth	100	100	100	100	100	103	103	103
Max. Error μm	6	6	7	7	8	8	9	9
$\varnothing$ Incl. ring mm	125.0	125.0	175.0	175.0	225.0	225.0	275.0	275.0

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS SXTH

	955.1102	955.1103	955.1104	955.1105	955.1106
Meas. range mm	2-6	6-10	10-20	20-50	50-100
Type	SXTH1	SXTH3	SXTH4	SXTH5	SXTH6
Number of heads	5	2	3	3	3
Number of rings	3	1	2	2	2
Measuring Force	4N	9N	9N	19N	19N

	955.1107	955.1108	955.1114	955.1115	955.1116
Meas. range mm	100-150	150-200	6-20	20-100	100-200
Type	SXTH7	SXTH8	SXTH10	SXTH11	SXTH12
Number of heads	2	2	5	6	4
Number of rings	1	1	3	4	2
Measuring Force	22N	22N	9N	19N	22N



Bore gauges

Xtreme

BASIC INSTRUMENT XTD AND INDIVIDUAL XTH

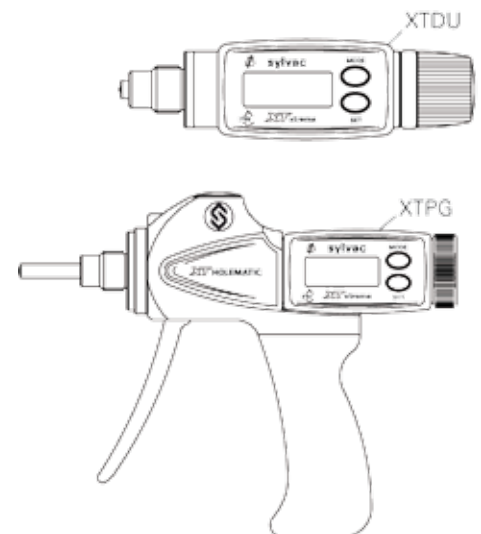
- Instrument according to technical specifications
- Wooden box (XTD : from 150 mm = 2 box; XTH : from 200 mm = 2 box) ¹⁾
- Rings according to technical specifications + UKAS certificate
- 1 x digital display XTDU or XTPG
- Lithium battery CR2302 included
- Manual
- Calibration certificate

¹⁾ Fumigated compatible ISPM 15 and NIMP 15

TECHNICAL SPECIFICATIONS ELECTRONIC UNITS XTDU AND XTPG

XTDU	951.3001	951.3002	951.3003	951.3004	951.3005	951.3006
Meas. range mm	2-6	6-10	10-20	20-50	50-100	100-300
Type	XTDU2	XTDU6	XTDU10	XTDU20	XTDU50	XTDU100
Thread	1/4"x 40 TPI	M5 x 0.5	5/16"x 40 TPI	5/8"x 24 TPI	5/8"x 24 TPI	5/8"x 24 TPI

XTPG	955.3001	955.3002	955.3003	955.3004
Meas. range mm	2-6	6-20	20-100	100-300
Type	XTPG1	XTPG2	XTPG3	XTPG4
Thread	1/4"x 40 TPI	5/16"x 40 TPI	5/8"x 24 TPI	5/8"x 24 TPI

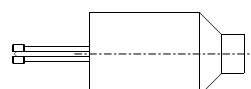


Bore gauges

Xtreme

TECHNICAL SPECIFICATIONS MEASURING HEADS XTHD

	953.2496	953.2497	953.2498	953.2499	953.2500
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6
Type	XTHD1	XTHD2	XTHD3	XTHD4	XTHD5
Execution	2 points / ST	2 points / ST	2 points / ST	2 points / ST	2 points / ST



2 points head

	953.2501	953.2502	953.2503	953.2504	953.2505
Meas. range mm	6-8	8-10	10-12.5	12.5-16	16-20
Type	XTHD6	XTHD8	XTHD10	XTHD12.5	XTHD16
Execution	3 points / ST	3 points / ST	3 points / ST	3 points / TC	3 points / TC

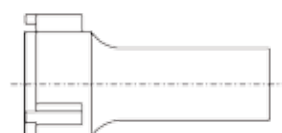
	953.2506	953.2507	953.2508	953.2509	953.2510
Meas. range mm	20-25	25-35	35-50	50-65	65-80
Type	XTHD20	XTHD25	XTHD35	XTHD50	XTHD65
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC	3 points / TC

	953.2511	953.2512	953.2513	953.2514	953.2515
Meas. range mm	80-100	100-125	125-150	150-175	175-200
Type	XTHD80	XTHD100	XTHD125	XTHD150	XTHD175
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC	3 points / TC

	953.2516	953.2517	953.2518	953.2519
Meas. range mm	200-225	225-250	250-275	275-300
Type	XTHD200	XTHD225	XTHD250	XTHD275
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC

ST = steel
TC = tungsten carbide

All heads are compatible with the HTX and XTH



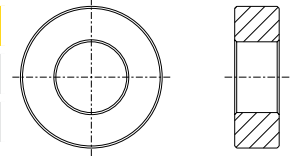
3 points head

Bore gauges

Xtreme

TECHNICAL SPECIFICATIONS SETTING RINGS XTR

	953.2598	953.2599	953.2600	953.2601	953.2602	953.2603
Meas. range mm	2.5	4	5	8	12.5	20
Type	XTR2.5	XTR4	XTR5	XTR8	XTR12.5	XTR20



	953.2604	953.2605	953.2606	953.2607	953.2608	953.2609	953.2610
Meas. range mm	35	65	80	125	175	225	275
Type	XTR35	XTR65	XTR80	XTR125	XTR175	XTR225	XTR275

TECHNICAL SPECIFICATIONS EXTENSIONS SX

	953.2001	953.2002	953.2003	953.2004	953.2005
Meas. range mm	6-10	10-12.5	12.5-20	20-50	50-300
Type	SX200	SX400	SX500	SX1	SX4
Length mm	63	76	100	150	150



Other accessories

	953.2010	953.2011
Meas. range mm	2-50	2-6
Description	Stand	Depth stop

APPLICATIONS



Pistol measuring system



Measuring with ratchet XTD system

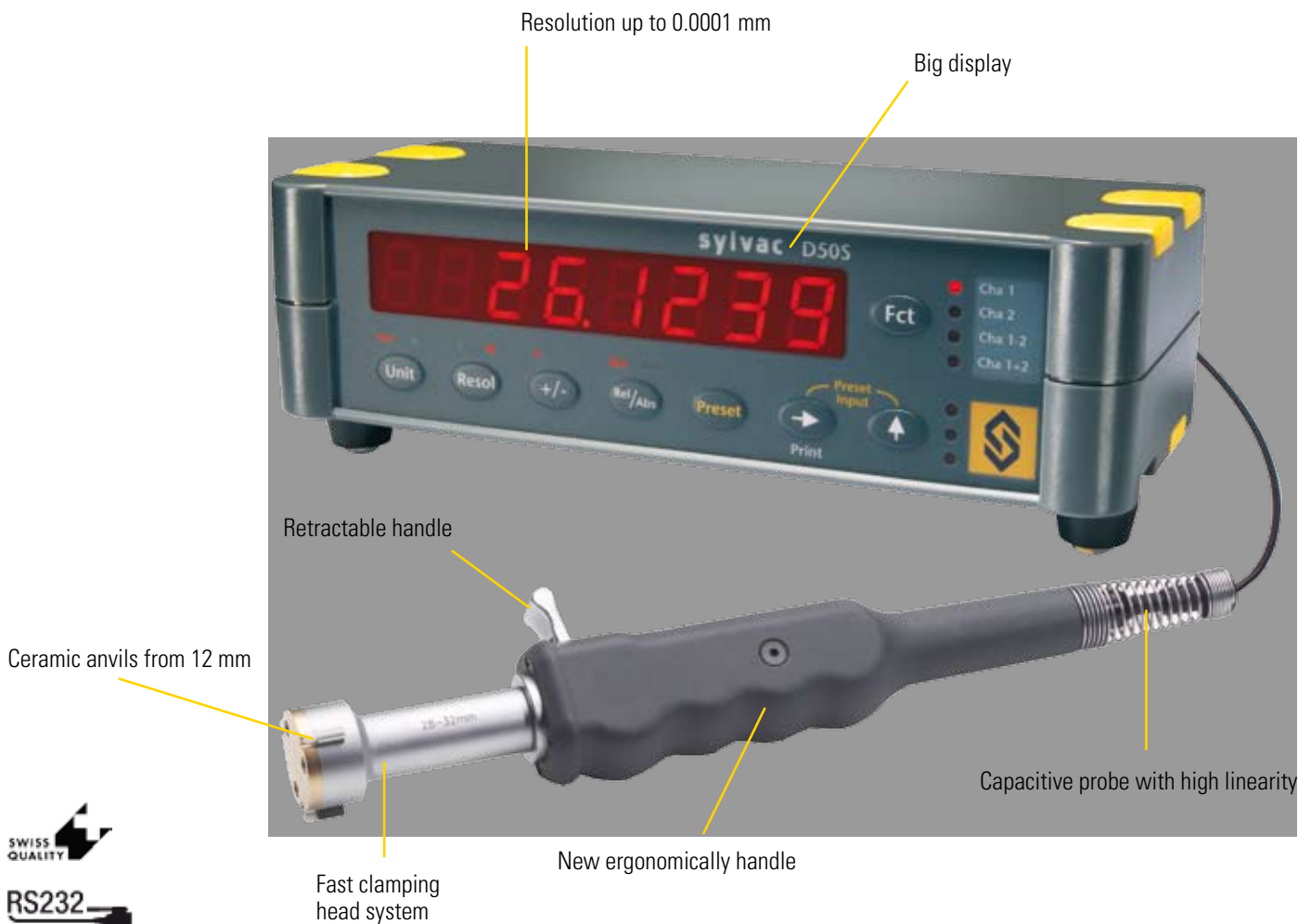


Measuring with pistol XTH system

High accuracy internal measurement Ultima

DESCRIPTION

- Measuring range from 2 to 310 mm
- Resolution up to 0.0001 mm
- Mechanical repeatability : 1 μ m from 2 to 210 mm and 2 μ m from 210 to 310 mm
- Robust construction designed for use by inspection and machine shop
- UKAS certificate supplied with each head
- UKAS certificate supplied with each setting ring.
- Rings manufactured according to DIN 2250 part 2 (standard)
- Blind bore measuring from 14 to 310 mm
- Compatible with all Sylvac digital display D50S, D80S, D100S, D200S
- Special heads on request (threads, grooves, splines, slot width, etc...)



High accuracy internal measurement Ultima

TECHNICAL SPECIFICATIONS OF MEASURING HEADS

		960.1006	960.1007	960.1008	960.1009	960.1010	960.1011	960.1012	960.1013
Meas. range	mm	2.0-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12
Ring Ø	mm	2.5	2.5	4	5	5	8	8	12
Depth	mm	9	9	12	18	18	60	60	61
Max. Error	µm	1	1	1	1	1	1	1	1

		960.1014	960.1015	960.1016	960.1017	960.1018	960.1019	960.1020	960.1021
Meas. range	mm	12-14	14-17	17-20	20-24	24-28	28-32	32-38	38-44
Ring Ø	mm	12	17	17	24	24	32	32	44
Depth	mm	61	61	61	69	69	69	72	72
Max. Error	µm	1	1	1	1	1	1	1	1

		960.1022	960.1023	960.1024	960.1025	960.1026	960.1027	960.1028	960.1029
Meas. range	mm	44-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120
Ring Ø	mm	44	60	60	80	80	100	100	120
Depth	mm	72	80	80	80	80	80	80	80
Max. Error	µm	1	1	1.5	1.5	1.5	1.5	1.5	1.5

		960.1030	960.1031	960.1032	960.1033	960.1034	960.1035	960.1036	960.1037
Meas. range	mm	120-130	130-140	140-150	150-160	160-170	170-180	180-190	190-200
Ring Ø	mm	120	140	140	160	160	180	180	200
Depth	mm	80	80	80	80	80	80	80	80
Max. Error	µm	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5

		960.1038	960.1039	960.1040	960.1041	960.1042	960.1043	960.1044	960.1045
Meas. range	mm	200-210	210-220	220-230	230-240	240-250	250-260	260-270	270-280
Ring Ø	mm	200	220	220	240	240	260	260	280
Depth	mm	80	80	2.5	80	80	80	80	80
Max. Error	µm	1.5	2	2	2	2	2	2	2

		960.1046	960.1047	960.1048
Meas. range	mm	280-290	290-300	300-310
Ring Ø	mm	280	300	300
Depth	mm	80	80	80
Max. Error	µm	2	2	2

High accuracy internal measurement Ultima

TECHNICAL SPECIFICATIONS SETS

	961.1102	961.1103	961.1104
Meas. range mm	2-6	6-10	10-20
Number of rings	3	1	2

	961.1107	961.1108	961.1109	961.1110
Meas. range mm	6-20	20-50	50-100	20-100
Number of rings	3	3	3	6

BASIC INSTRUMENT

Individual

- Instrument according to technical specifications (handle with integrated probe + head)
- Setting rings according to technical specifications
- Wooden box ¹⁾
- Manual

Sets

- Instrument according to technical specifications (handle with integrated probe + head)
- Setting rings according to technical specifications
- Digital display D50S (804.1050)
- Wooden box ¹⁾
- Manual

¹⁾ Fumigated compatible ISPM 15 and NIMP 15

TECHNICAL SPECIFICATIONS HANDLES

	961.3001	961.3002	961.3003	961.3004
Meas. range mm	2-6	6-20	20-100	100-310

Capacitive probe included

TECHNICAL SPECIFICATIONS EXTENSIONS

	961.2001	961.2002	961.2003	961.2004	961.2005	961.2006	961.2007
Meas. range mm	6-10	10-12	12-20	20-50	50-310	20-50	50-310
Length mm	63	75	100	50	50	150	150

High accuracy internal measurement Ultima

APPLICATIONS



Data output thru RS232



Two Ultima gauges connected with one unit
Sylvac D50S only



Adjustable depths stop (on request)



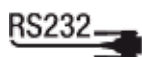
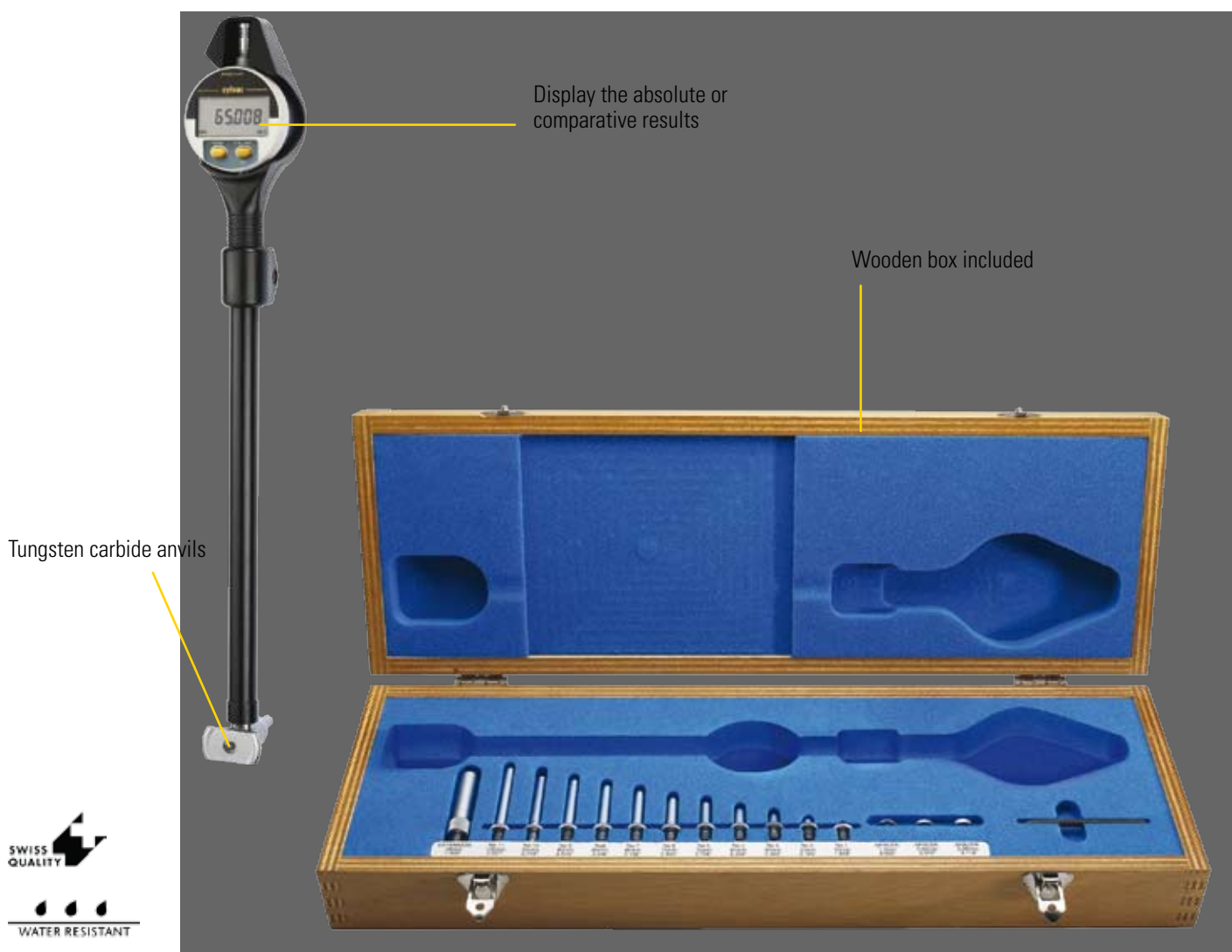
Set including 6 measuring heads, 3 master rings, 1 D50S, the handle and his probe, charging unit

Digital cylindrical bore gauges

CBG

DESCRIPTION

- Measuring range 12.5 - 600 mm
- 3- point centering, 2-point measurement
- Fast simple checking for bore size, ovality, taper...
- Thermally insulated for extra stability
- Light and handy



Digital cylindrical bore gauges

CBG

TECHNICAL SPECIFICATIONS

		956.2001	956.2002	956.2003	956.2004	956.2005
Measuring range	mm	12.5-22	22-50	50-150	150-300	150-600
Rod		7	6	11	---	---
Adjustable rod		---	---	---	6	6
Extension		1	2	1	1	1
Washer		---	---	3	---	---
Standard depth	mm	150	150	250	380	380
Other measuring depths on request	mm	75,300	75,300,450, 600,760,910	75,450,600 760,910	600,760,910	600,760,910
Repeatability	µm	2				
S_Connect : Opto		USB / RS232 / Digimatic / Wireless				
Programmable by PC		●				
Min / max / delta values		●				
PRESET recall on memorized min/max values ¹⁾		●				

¹⁾ Master value

BASIC INSTRUMENT

- Instrument according to technical specifications
- Anvils or adjustable anvils according to technical specifications
- Extensions and washers according to technical specifications
- Lithium battery CR2302 included
- Wooden box ²⁾

²⁾ Fumigated compatible ISPM 15 and NIMP 15

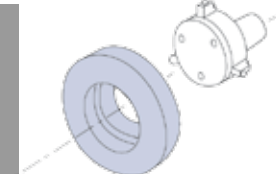
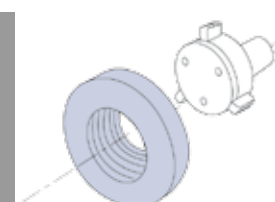
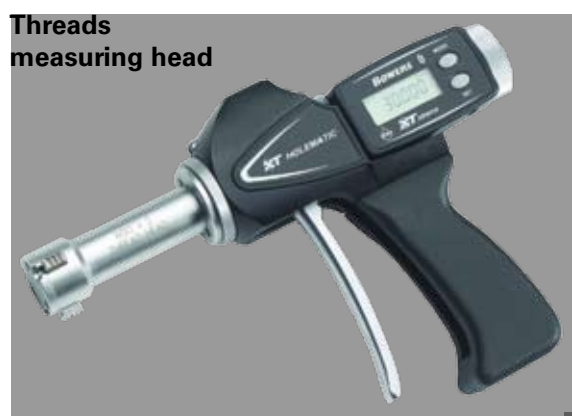
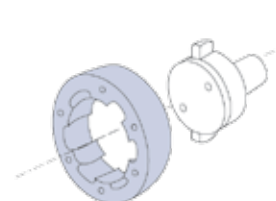
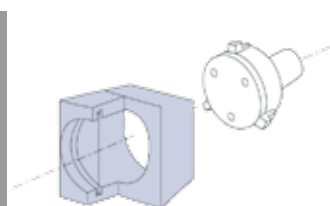
Bore gauges

other applications

DESCRIPTION

In spite of the fact that our range of interior measuring instruments is more complete, all the applications cannot be covered by the standard series. The illustrations below express the possibilities of special applications which we can carry out.

For instance, below some pictures of special applications :



USB

RS232

Wifi

OPTO

DIGITAL SCALES

The SYLVAC Program contains horizontal and vertical digital scales. The measuring range is between 100 and 4000 mm, special measuring range on request. The display units all are equipped with a data output.

In complement with the digital scales, SYLVAC also offers two models of micrometer screws with digital display. They are conceived mainly to equip XY tables of microscopes, profile projectors. The resolution with 1 μm allows a positioning of high accuracy.

Power supply: Lithium battery 3V, standard CR2032

Self-contained use : 2 years of daily use

Operational temperature +5° to +40°C

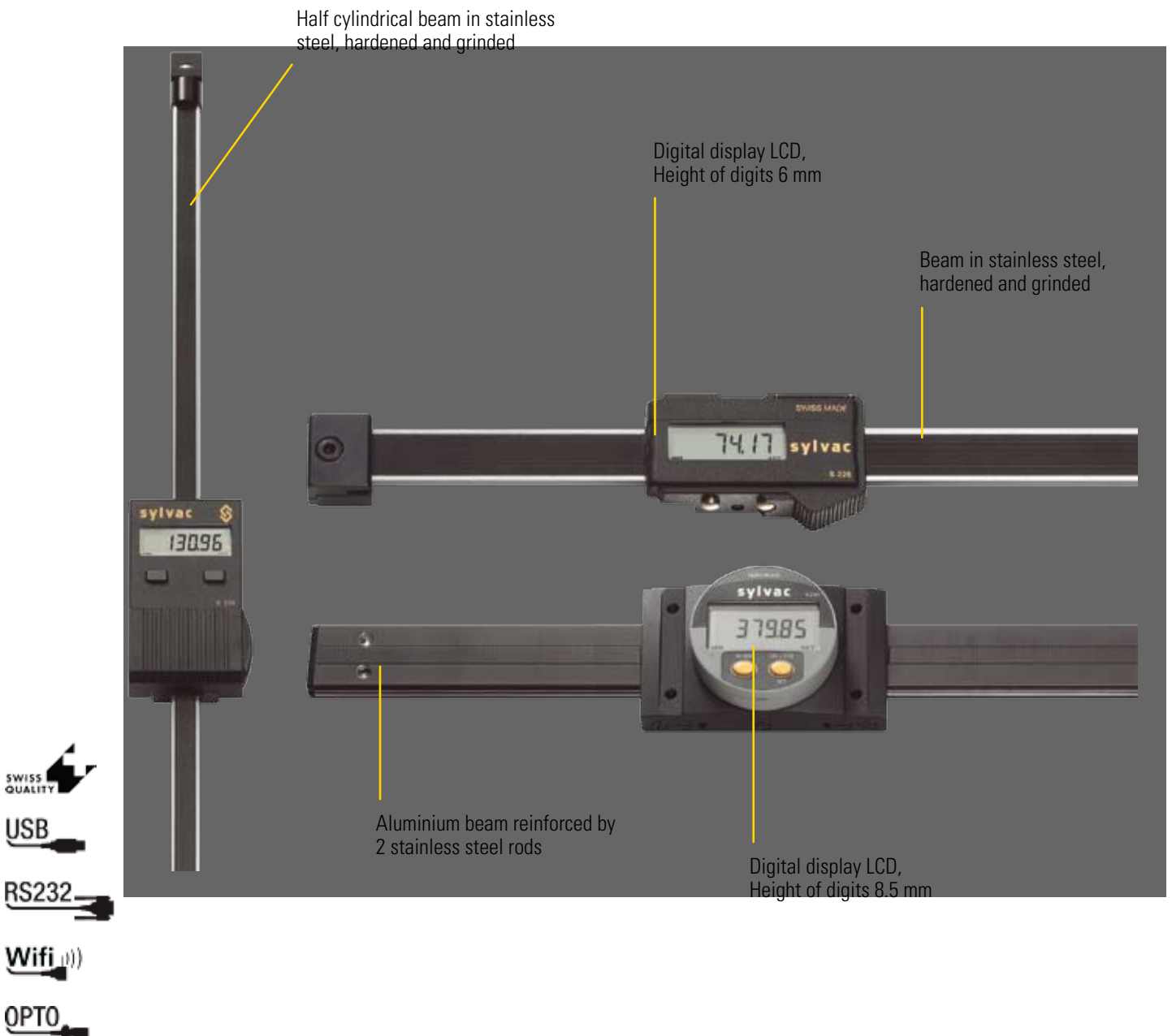
mm/inch conversion



Digital scales

DESCRIPTION

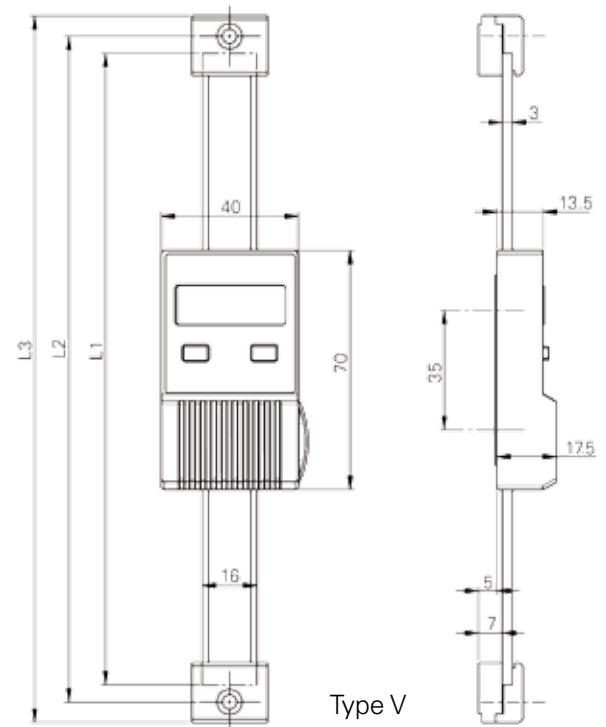
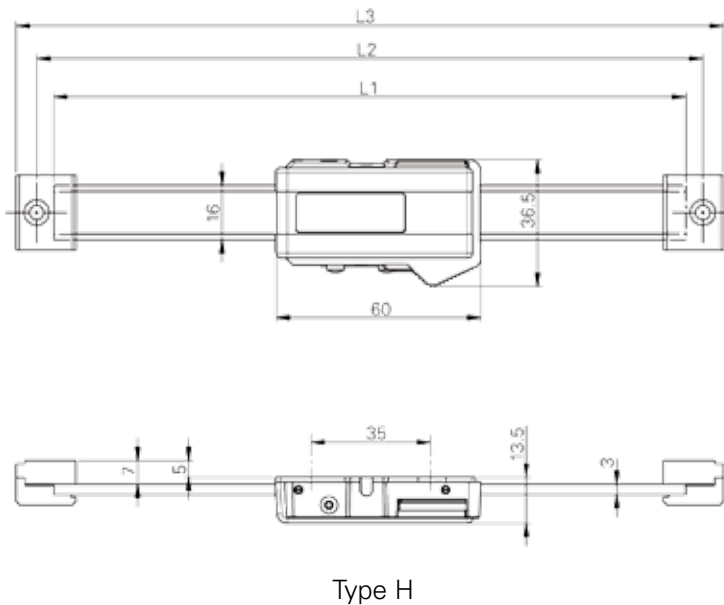
- Max. velocity of displacement : 2 m/sec
- Data output OPTO RS232
- External power supply possibility
- Special dimensions on request for half cylindrical beam and ULD III
- Easy assembling
- Range > 4 m possible



Digital scales

Flat

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

		916.1000	916.1002	916.1004	916.1500	916.1502	916.1504
Measuring range	mm	100	150	200	100	150	200
Type		H	H	H	V	V	V
Max. Error	µm	20	30	30	20	30	30
Repeatability ¹⁾	µm	10	10	10	10	10	10
Resolution mm		0.01	0.01	0.01	0.01	0.01	0.01
L1	mm	185	235	286	185	235	286
L2	mm	197	247	298	197	247	298
L3	mm	209	259	310	209	259	310
S_Connect : Opto		USB / RS232 / Digimatic / Wireless ²⁾					
Selection of measuring direction					●		
PRESET function					●		
2 references					●		

¹⁾ ± 1 digit

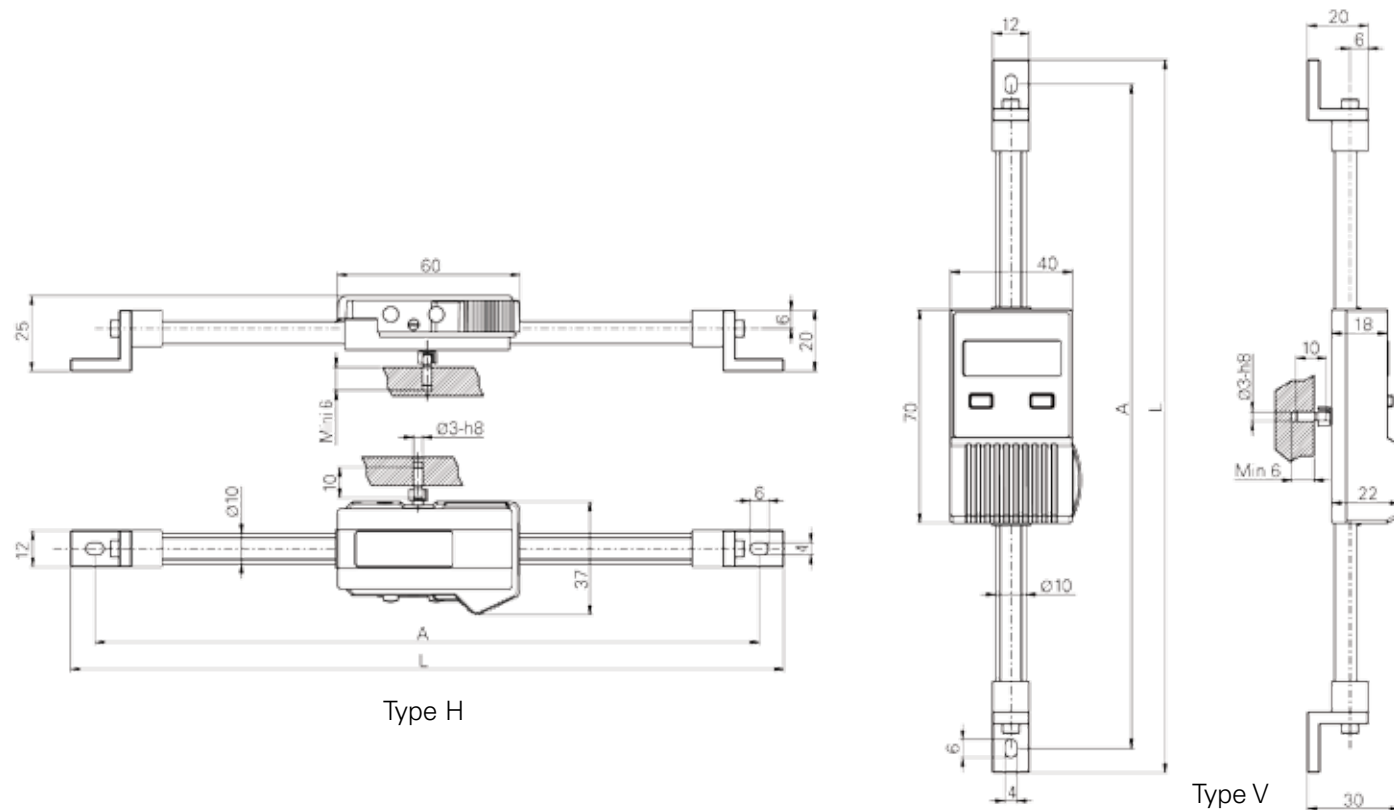
²⁾ see cables chapter

Drive type fastening see page 77

Digital scales

Half cylindrical

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

		916.3002	916.3004	916.3006	916.3008	916.3502	916.3504	916.3506	916.3508
Measuring range C	mm	≤ 300	≤ 600	≤ 800	≤ 1000	≤ 300	≤ 600	≤ 800	≤ 1000
Type		H	H	H	H	V	V	V	V
Max. Error	μm	30	40	50	50	30	40	50	50
Repeatability ¹⁾	μm	10	10	10	10	10	10	10	10
Resolution	mm	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
S_Connect : Opto	USB / RS232 / Digimatic / Wireless ²⁾								
Selection of meas.direction	●								
PRESET function	●								
2 references	●								

¹⁾ ± 1 digit

²⁾ see cables chapter

Dimensions of scale H : $L = C + 2.5\% + 120$
 $A = L - 16$

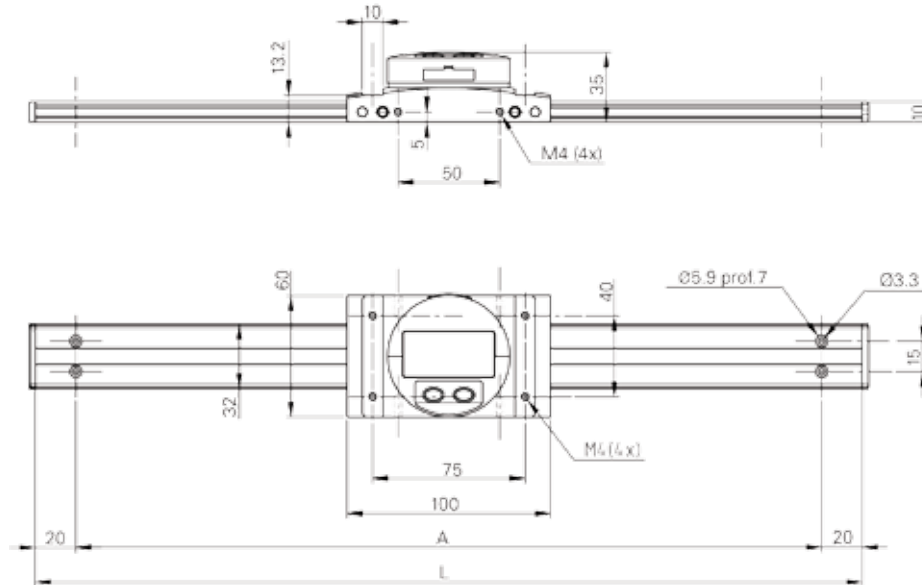
Dimensions of scale V : $L = C + 2.5\% + 130$
 $A = L - 16$

Drive type fastening, see page 77

Digital scales

ULD III

DIMENSIONAL DRAWINGS



TECHNICAL SPECIFICATIONS

		914.1556	914.1560	914.1565	914.1570	914.1580	914.1590
Measuring range C	mm	600	1000	1500	2000	3000	4000
Max. Error	µm	50	70	80	150	200	250
Repeatability	µm	20	20	20	20	20	20
Resolution	mm	0.01	0.01	0.01	0.01	0.01	0.01
Number of clamping holes pairs	N	2	3	4	5	6	7
S_Connect : Opto	USB / RS232 / Digimatic / Wireless ¹⁾						
PRESET function					●		
Selection of measuring direction					●		
2 references					●		

¹⁾ see cables chapter

Sizes : $L = C + 2.5\% + 100$

$A = L - 40/N - 1$ (N : Number of clamping holes pairs)

Digital scales

BASIC INSTRUMENT – DIGITAL SCALES

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Clamping device 916.1901

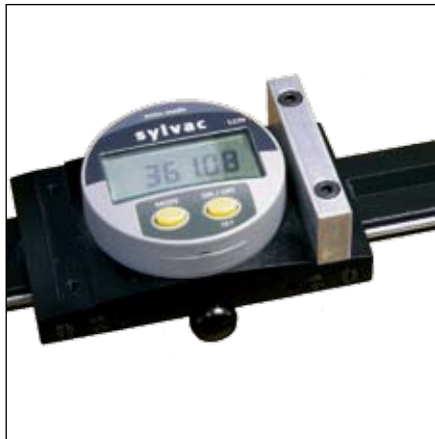
BASIC INSTRUMENT – CYLINDRICAL AND ULD III SCALES

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual

APPLICATIONS



Depth measurement on a drilling machine



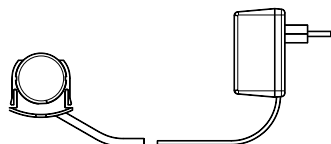
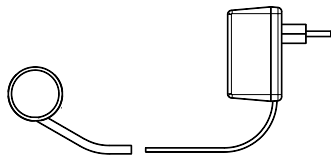
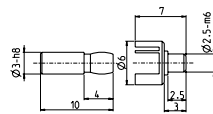
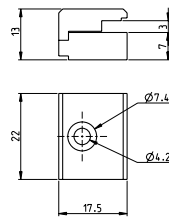
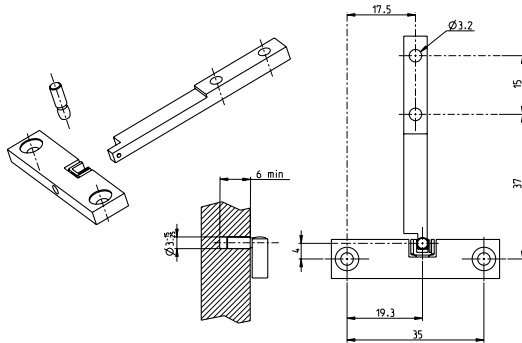
Stop thrust mounted on moving device



Measuring of metal rod

Digital scales

ACCESSORIES

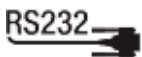
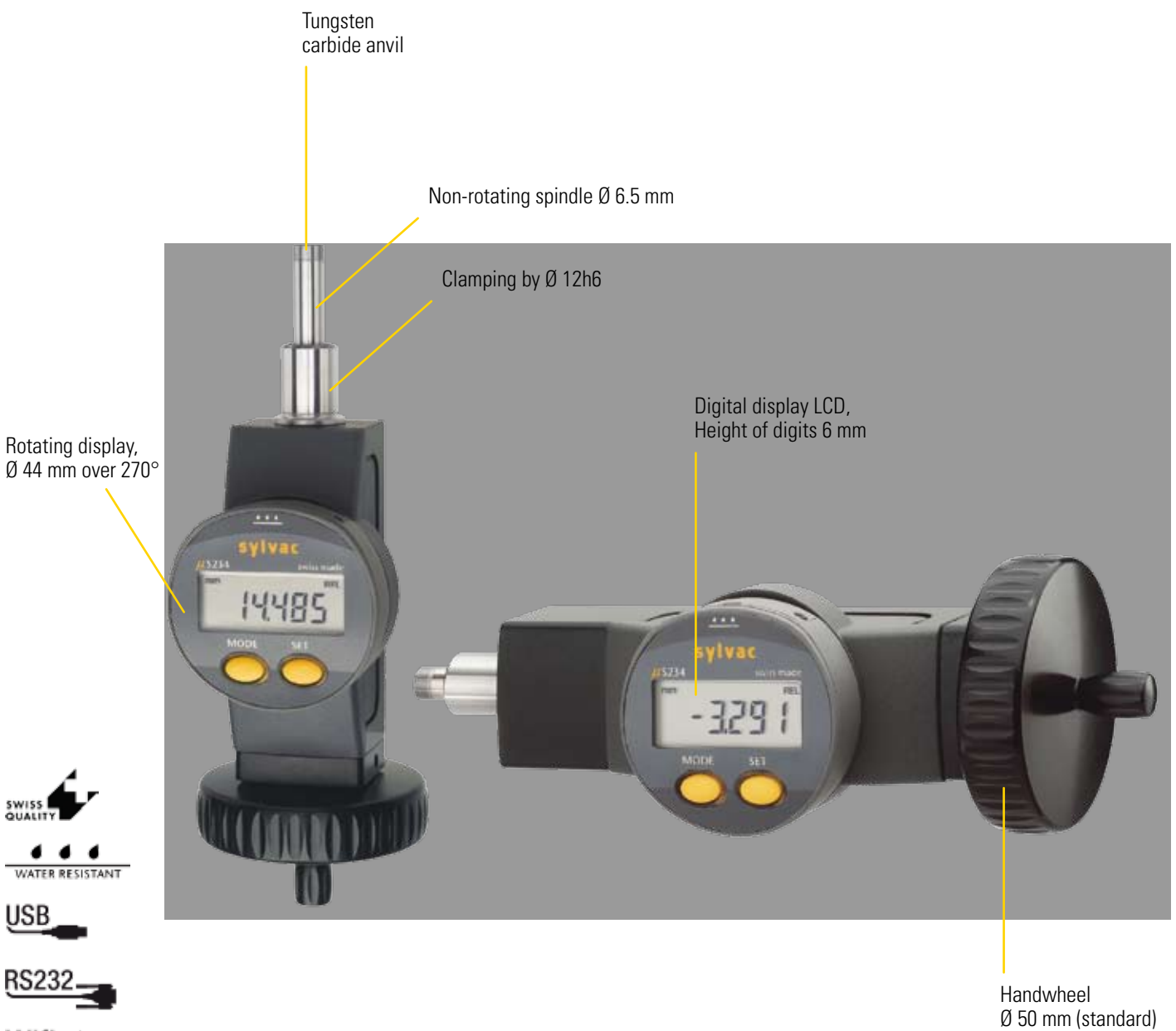


		DIGITAL	HALF CYLINDRICAL	ULD III
916.1900	Drive type fastening	●		
916.1901	Clamping device	●		
916.1903	Battery extractor Only for H type	●	●	
916.1904	Drive type fastening		●	
926.5515	External power supply for H scales	●	●	
926.5516	External power supply for V and ULD III scales	●	●	●

Digital micrometer screws

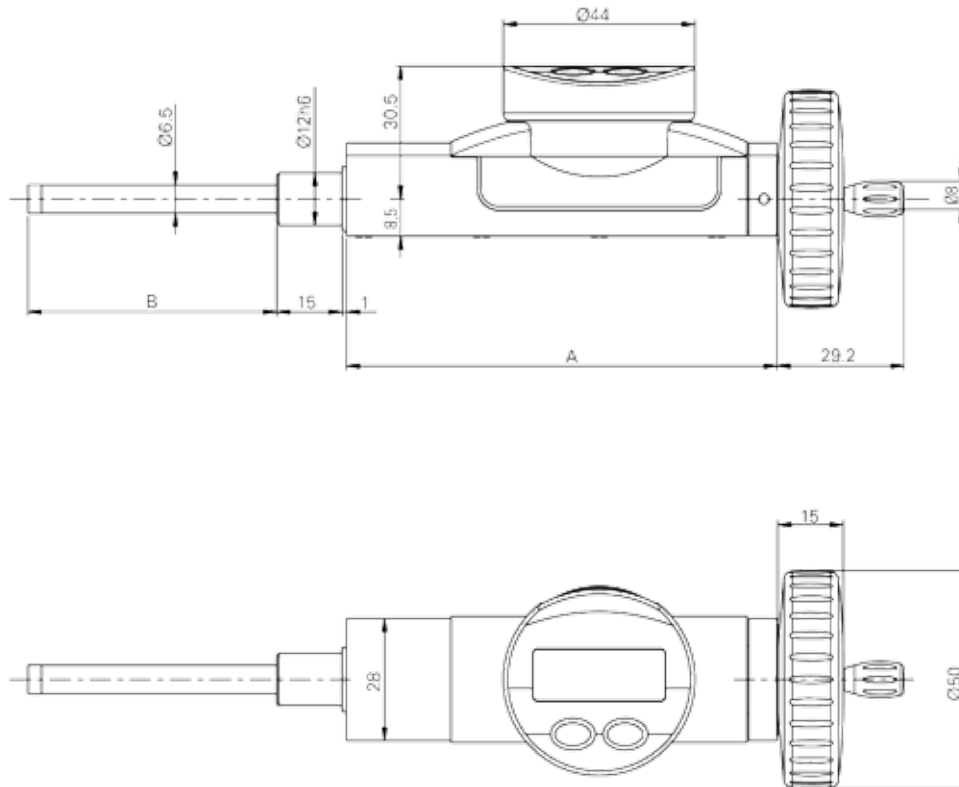
DESCRIPTION

- Data output RS232, combined with external power supply
- Fine adjustment available (accessories)
- Type H and V (same model)
- Reduced dimensions, compact
- Other handwheels on request



Digital micrometer screws

DIMENSIONAL DRAWING



TECHNICAL SPECIFICATIONS

		852.2101	852.2011
Measuring range	mm	0-25	0-50
Max. Error	µm	5	8
Repeatability	µm	2	2
Resolution	mm	0.001	0.001
A	mm	74.5	98.5
B	mm	33.1	57.1
S_Connect : Power		USB / RS232 / Digimatic / Wireless ¹⁾	
Selection of measuring direction		●	
PRESET function		●	
Absolute or relative measurement		●	

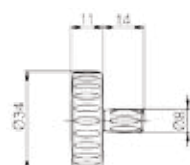
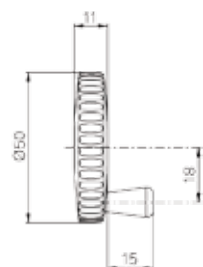
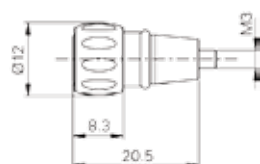
¹⁾ see cables chapter

Digital micrometer screws

BASIC INSTRUMENT

- Instrument according to technical specifications
- Lithium battery CR2302 included
- Manual
- Handwheel Ø 50 mm (852.2311)
- Calibration certificate

ACCESSORIES



852.2310

Fine adjustment device

852.2311

Handwheel Ø 50 mm with crank handle for fast motion

852.2312

Handwheel Ø 34 mm

APPLICATIONS



Fine adjustment device type 852.2310



Use on measuring microscope

HEIGHT GAUGE

Especially developed and optimized for a use in production line, HI_Cal offers a great efficiency thanks to its large screen where it can simultaneously displayed measurements of diameters and distances between centres.

Its principal advantages consist in its ease of use, reduced dimensions of its base, its great lightness, the compatibility of the accessories with the instruments of preceding generation, the two speeds of travel which offer a great comfort during the measurement of small diameters.

Inductive and motorized Sylvac system (patented)

Data output RS232 – USB

mm/inch conversion

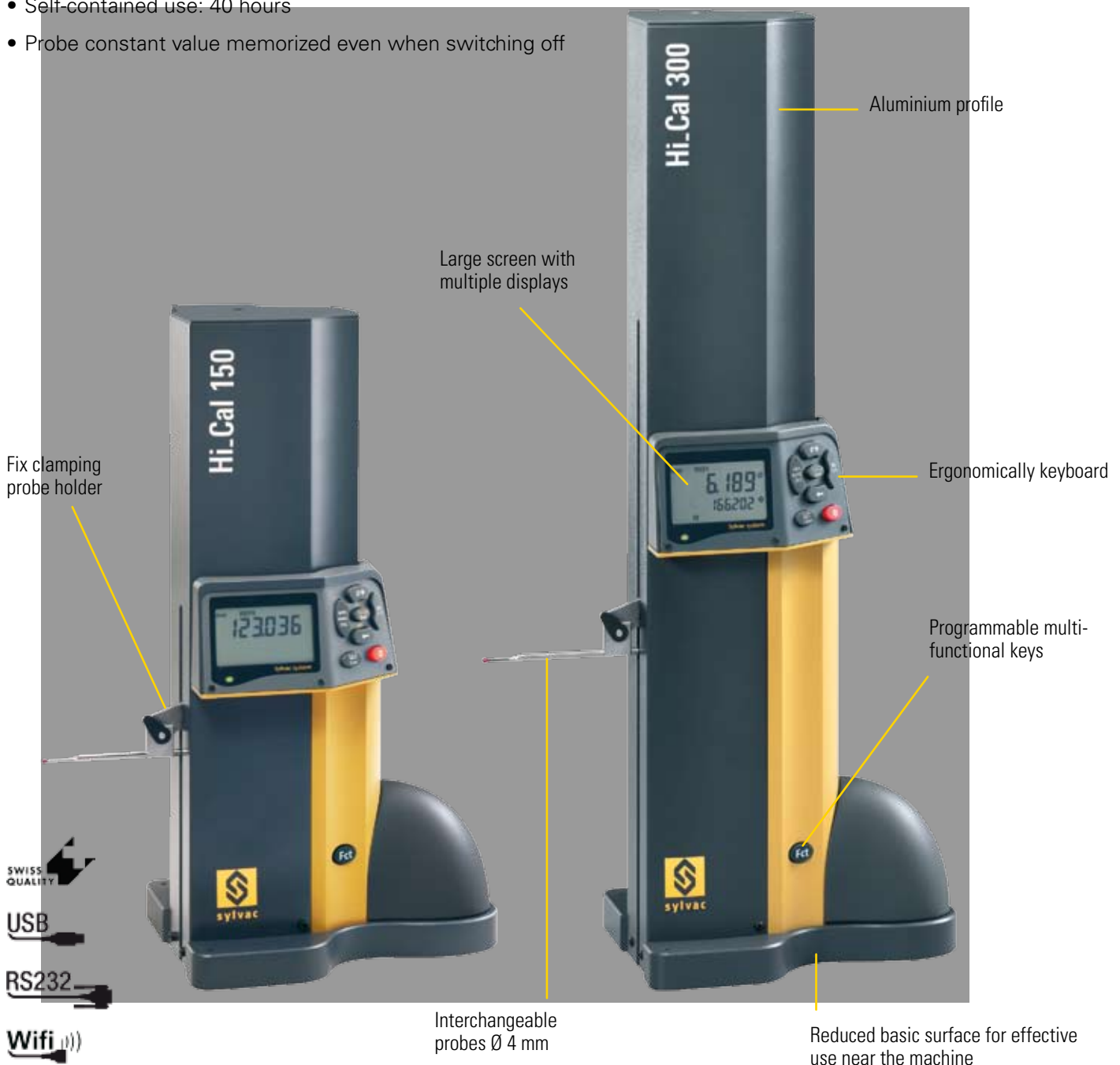


Height gauge

Hi_Cal

DESCRIPTION

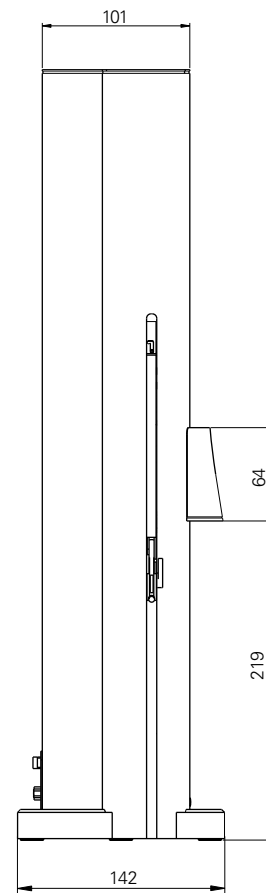
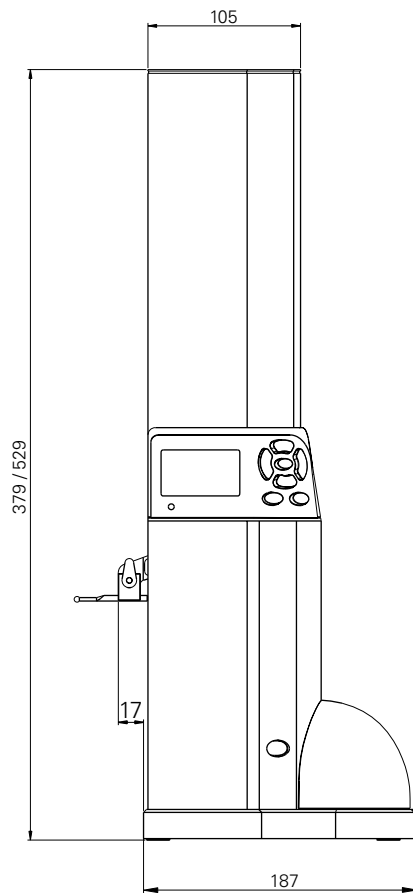
- Intuitive functions
- Great mobility
- Measurement of internal and external diameters, centerlines, heights, thicknesses, depths, surfaces
- Versions 150 and 300 mm
- Data output USB and RS232
- Measuring force extremely low and adjustable according to the probe
- No influence of the operator on the result of measurement
- Self-contained use: 40 hours
- Probe constant value memorized even when switching off



Height gauge

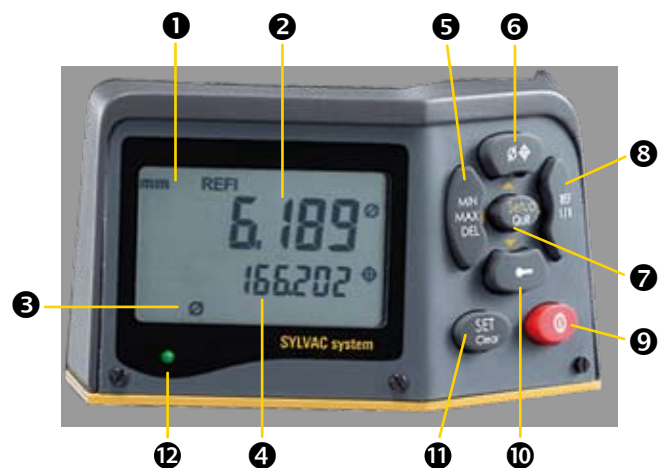
Hi_Cal

DIMENSIONAL DRAWINGS



DISPLAYS

- ❶ Measuring unit and actives reference
- ❷ Display of measuring value
- ❸ Active measuring mode
- ❹ Centerline display
- ❺ Dynamic measuring mode
- ❻ Diameter / height measurement
- ❼ Access to setting menu
- ❽ Selection of reference Ref I / Ref II
- ❾ Switch ON / switch OFF
- ❿ Constant of ball probe
- ⓫ Validation / Initialization of min, max mode
- ⓬ Luminous indication of valide measurement



Height gauge

Hi_Cal

TECHNICAL SPECIFICATIONS

		830.0150	830.0300
Measuring range	mm	150	300
Application range	mm	0 - 155	0 - 320
Max. Error	µm	2.5 x L / 175 ¹⁾	
Repeatability	µm	2	
Resolution	mm	0.01 / 0.001	
Velocity	mm/s	50 / 100	
Measuring force	N	0.2 - 0.3	
Self-contained use	h	> 40	
Height	mm	379	529
Weight	kg	3.9	4.6
S_Connect		USB / mini USB / RS232 ²⁾	
Programmable by PC		●	
Zero setting		●	
Min / max / delta		●	
PRESET function		●	
2 references		●	
Height measurement, Ø and centerlines		●	
2 types of progressive speed		●	

¹⁾ With standard probe, in laboratory conditions

²⁾ see cables chapter

BASIC INSTRUMENT

- Loose cover HI_CAL 150
- Loose cover HI_CAL 300
- Charging set (930.4010¹⁾ / 11/12/13)
- Ruby ball probe Ø 3 mm
- Setting gauge
- Calibration certificate

¹⁾ according to country

Height gauge

Hi_Cal

APPLICATIONS



Depth measurements with accessories 930.2108 and 930.2105



Depth measurements with accessories 930.2108 and 905.2204



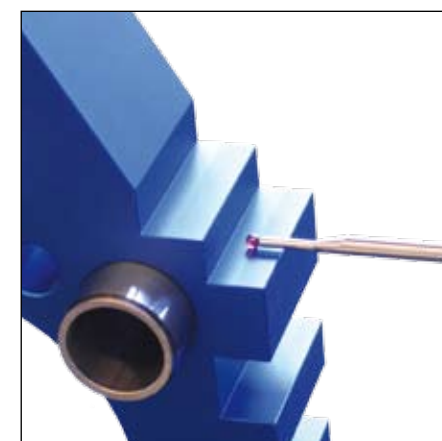
Internal measurements with ruby ball probe Ø 3 mm, 930.2101 (standard)



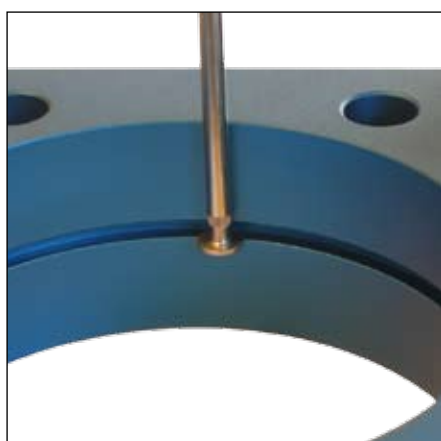
Heights and thicknesses measurements with the standard probe 930.2101



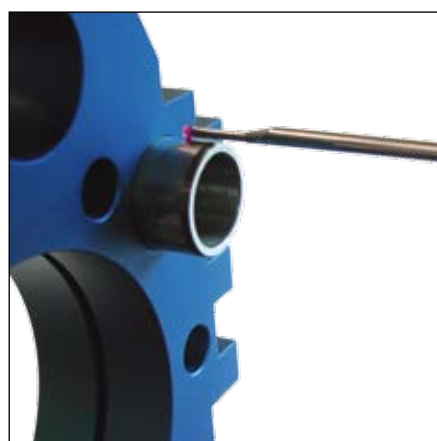
Internal groove measurements with accessories 930.2108, 930.2210 and 905.2207



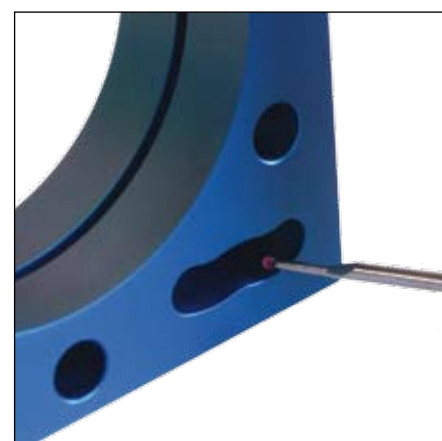
Taking the probe constant value with the setting bloc 930.2002 (standard)



Internal groove measurements with accessories 930.2108, 930.2210 and 905.2205



External diameter measurements with the standard probe 930.2101

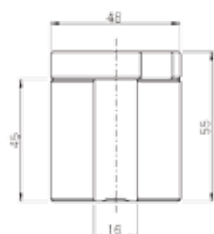
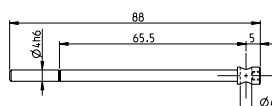
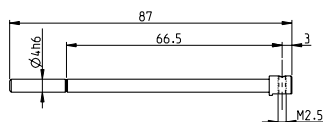
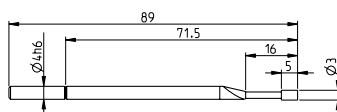
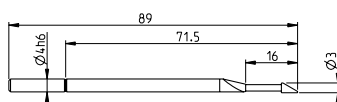
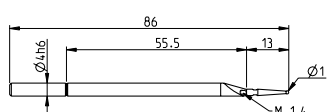
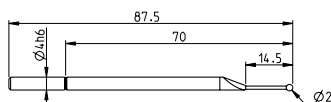
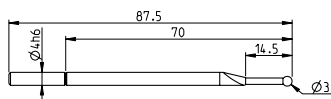


Min/Max/Delta measurements

Height gauge

Hi_Cal

ACCESSORIES

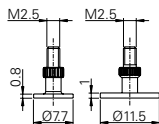
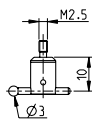
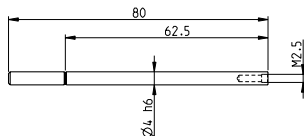
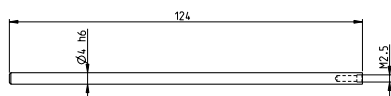
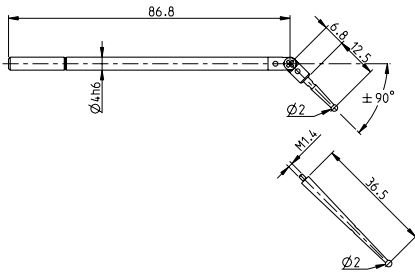


930.2101	Ruby ball probe Ø 3 mm
930.2103	Ruby ball probe Ø 2 mm
930.2104	Tungsten carbide ball probe Ø 1 mm
930.2105	Knife-edged measuring probe TC Ø 3 mm
930.2106	Cylindrical measuring probe TC Ø 3 mm
930.2107	Probe holder 90° M2.5
930.2108	Probe holder 90° Ø 4 mm
930.2002	Setting gauge
904.4010	Charging set 230V EUR
904.4011	Charging set 230V UK
904.4012	Charging set 120V US
904.4013	Charging set 100V JPN

Height gauge

Hi_Cal

ACCESSORIES



930.2102	Swivelling tungsten carbide ball probe (M1.4)
930.2109	Extension 124 mm M2.5
930.2110	Extension 80 mm M2.5
905.2207	Probe holder and ruby ball probe Ø 3 mm, M2.5
905.2205	Disk shaped anvils Ø 7.7 mm and Ø 11.5 mm, M2.5
930.2150	Full accessories set in wooden box Content : 930.2103, 930.2104, 930.2105, 930.2106, 930.2107, 930.2108, 930.2109, 930.2110, 930.2204, 930.2205, 930.2207
930.2151	Basic accessories set in wooden box Content : 930.2103, 930.2104, 930.2105, 930.2106
904.4101	External contact (foot-pedal)

