

INTERNAL MEASURING INSTRUMENTS

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

The measuring range goes from 2 to 500mm in the Xtreme type and from 2 to 310mm in the Ultima type. Special executions are manufactured on request.

Sylvac inductive measuring system (patented)

Data output

Power supply: Lithium battery 3V, Type CR 2032

Operational temperature: +5 to +40°C

mm/inch conversion

Repeatability: $\leq 2 \mu\text{m}$



Bore gauges

Xtreme 3 BT

DESCRIPTION

- Instruments covering a large measuring range (2 - 300 mm)
- **Integrated Bluetooth® technology and Proximity**
- Blind bore measurement from 2 to 6 mm and from 12.5 mm
- Interchangeable measuring heads
- UKAS certificate included with all rings
- UKAS certificate included with each instrument
- Manufactured according to DIN863
- Memorization of 4 ring gauges values
- Water and coolant resistant, protection rating IP67 according to IEC 60529
- Programmable by PC



* Up to 8 instruments connected per dongle #981.7100
 More informations on How to use Bluetooth® leaflet SYL_1401_EN_BT

Bore gauges

Xtreme 3 BT

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS BLUETOOTH®

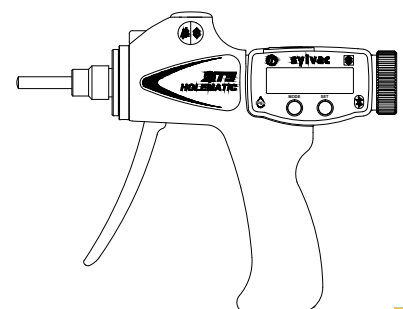
XT3D	951.6102	951.6103	951.6104	951.6105
Meas. range mm	2-6	6-10	10-20	20-50
Type	SXT3D 1M BT	SXT3D 3M BT	SXT3D 4M BT	SXT3D 5M BT
Number of heads	5	2	3	3
Numb. of rings	3	1	2	2
Meas. Force	8N	7N	15N	21N

XT3D	951.6106	951.6107	951.6108	951.6109
Meas. range mm	50-100	100-150	150-200	100-200
Type	SXT3D 6M BT	SXT3D 7M BT	SXT3D 8M BT	SXT3D 9M BT
Number of heads	3	2	2	4
Numb. of rings	2	1	1	2
Meas. Force	28N	32N	32N	32N

XT3H	955.6102	955.6103	955.6104	955.6105	955.6106
Meas. range mm	2-6	6-10	10-20	20-50	50-100
Type	SXT3H 1M BT	SXT3H 3M BT	SXT3H 4M BT	SXT3H 5M BT	SXT3H 6M BT
Number of heads	5	2	3	3	3
Numb. of rings	3	1	2	2	2
Meas. Force	4N	9N	9N	19N	19N

XT3H	955.6107	955.6108	955.6114	955.6115	955.6116
Meas. range mm	100-150	150-200	6-20	20-100	100-200
Type	SXT3H 7M BT	SXT3H 8M BT	SXTH10 BM BT	SXTH11 BM BT	SXT3H 9M BT
Number of heads	2	2	5	6	4
Numb. of rings	1	1	3	4	2
Meas. Force	22N	22N	9N	19N	22N

*Individual Bluetooth® instruments : on request



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Bore gauges

Xtreme 3

DESCRIPTION

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- Blind bore measurement from 2 to 6 mm and from 12.5 mm
- Interchangeable measuring heads
- UKAS certificate included with all rings
- UKAS certificate included with each instrument
- Manufactured according to DIN863
- Memorization of 4 ring gauges values
- Water and coolant resistant, protection rating IP67 according to IEC 60529
- Programmable by PC
- S_Connect Proximity

X_Treme XTD

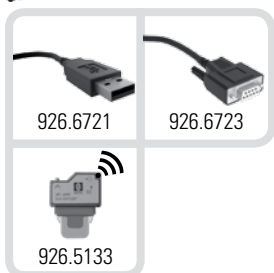


X_Treme XTH



IP67

PROXIMITY



Bore gauges

Xtreme 3

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XT3D

	950.5006	950.5007	950.5008	950.5009	950.5010	950.5011	950.5012	950.5013
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12.5
Type	XT3D 1M	XT3D 2M	XT3D 3M	XT3D 4M	XT3D 5M	XT3D 6M	XT3D 8M	XT3D 10M
Depth mm	9	9	12	18	18	58	58	58
Max. Error μm	4	4	4	4	4	4	4	4
\emptyset Incl. ring mm	2.5	2.5	4.0	4.0	5.0	8.0	8.0	12.5

	950.5014	950.5015	950.5016	950.5017	950.5018	950.5019	950.5020	950.5021
Meas. range mm	12.5-16	16-20	20-25	25-35	35-50	50-65	65-80	80-100
Type	XT3D 12M	XT3D 16M	XT3D 20M	XT3D 25M	XT3D 35M	XT3D 50M	XT3D 65M	XT3D 80M
Depth mm	62	62	66	66	80	80	80	100
Max. Error μm	4	4	4	4	4	5	5	5
\emptyset Incl. ring mm	12.5	20.0	20.0	35.0	35.0	65.0	65.0	80.0

	950.5022	950.5023	950.5024	950.5025	950.5026	950.5027	950.5028	950.5029
Meas. range mm	100-125	125-150	150-175	175-200	200-225	225-250	250-275	275-300
Type	XT3D 100M	XT3D 125M	XT3D 150M	XT3D 175M	XT3D 200M	XT3D 225M	XT3D 250M	XT3D 275M
Depth mm	115	115	115	115	118	118	118	118
Max. Error μm	6	6	7	7	8	8	9	9
\emptyset Incl. ring mm	125.0	125.0	175.0	175.0	225.0	225.0	275.0	275.0

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS SXT3D

	951.5102	951.5103	951.5104	951.5105	951.5106	951.5107	951.5108	951.5109
Meas. range mm	2-6	6-10	10-20	20-50	50-100	100-150	150-200	100-200
Type	SXT3D 1M	SXT3D 3M	SXT3D 4M	SXT3D 5M	SXT3D 6M	SXT3D 7M	SXT3D 8M	SXT3D 9M
Number of heads	5	2	3	3	3	2	2	4
Numb. of rings	3	1	2	2	2	1	1	2
Meas. Force	8N	7N	15N	21N	28N	32N	32N	32N

Bore gauges

Xtreme 3

TECHNICAL SPECIFICATIONS INDIVIDUAL INSTRUMENTS XT3H

	954.5006	954.5007	954.5008	954.5009	954.5010	954.5011	954.5012	954.5013
Meas. range mm	2-2.5	2.5-3	3-4	4-5	5-6	6-8	8-10	10-12.5
Type	XT3H 1M	XT3H 2M	XT3H 3M	XT3H 4M	XT3H 5M	XT3H 6M	XT3H 8M	XT3H 10M
Depth	9	9	12	18	18	58	58	58
Max. Error μm	4	4	4	4	4	4	4	4
\emptyset Incl. ring mm	2.5	2.5	4.0	4.0	5.0	8.0	8.0	12.5

	954.5014	954.5015	954.5016	954.5017	954.5018	954.5019	954.5020	954.5021
Meas. range mm	12.5-16	16-20	20-25	25-35	35-50	50-65	65-80	80-100
Type	XT3H 12M	XT3H 16M	XT3H 20M	XT3H 25M	XT3H 35M	XT3H 50M	XT3H 65M	XT3H 80M
Depth	62	62	66	66	80	80	80	85
Max. Error μm	4	4	4	4	4	5	5	5
\emptyset Incl. ring mm	12.5	20.0	20.0	35.0	35.0	65.0	65.0	80.0

	954.5022	954.5023	954.5024	954.5025	954.5026	954.5027	954.5028	954.5029
Meas. range mm	100-125	125-150	150-175	175-200	200-225	225-250	250-275	275-300
Type	XT3H 100M	XT3H 125M	XT3H 150M	XT3H 175M	XT3H 200M	XT3H 225M	XT3H 250M	XT3H 275M
Depth	100	100	100	100	100	103	103	103
Max. Error μm	6	6	7	7	8	8	9	9
\emptyset Incl. ring mm	125.0	125.0	175.0	175.0	225.0	225.0	275.0	275.0

TECHNICAL SPECIFICATIONS INSTRUMENTS SETS SXT3H

	955.5102	955.5103	955.5104	955.5105	955.5106
Meas. range mm	2-6	6-10	10-20	20-50	50-100
Type	SXT3H 1M	SXT3H 3M	SXT3H 4M	SXT3H 5M	SXT3H 6M
Number of heads	5	2	3	3	3
Number of rings	3	1	2	2	2
Measuring Force	4N	9N	9N	19N	19N

	955.5107	955.5108	955.5114	955.5115	955.5116
Meas. range mm	100-150	150-200	6-20	20-100	100-200
Type	SXT3H 7M	SXT3H 8M	SXT3H 10M	SXT3H 11M	SXT3H 12M
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 3

BASIC INSTRUMENT XT3D AND XT3H INDIVIDUAL

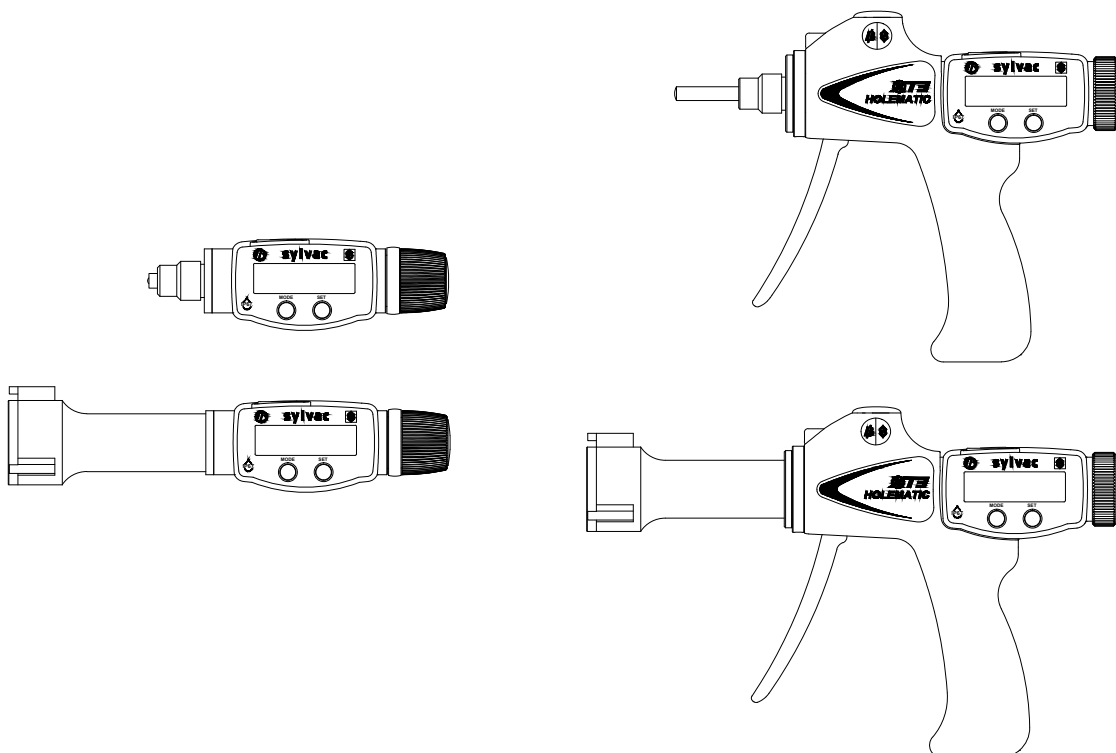
- Instrument according to technical specifications
- Wooden box (XT3D : from 150 mm = 2 box; XT3H : from 200 mm = 2 box) ¹⁾
- Rings according to technical specifications + UKAS certificate
- 1 x digital display XT3DU or XT3PG
- Lithium battery CR2032 included
- Instruction manual
- Calibration certificate

¹⁾ Fumigated compatible ISPM 15 and NIMP 15

TECHNICAL SPECIFICATIONS ELECTRONIC UNITS XT3DU AND XT3PG

XT3DU	951.5001	951.5002	951.5003	951.5004	951.5005	951.5006	951.5007
Meas. range mm	2-6	6-10	10-20	20-50	50-100	100-300	200-300
Type	XT3DU 2M	XT3DU 6M	XT3DU 10M	XT3DU 20M	XT3DU 50M	XT3DU 100M	XT3DU 200M
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	5/8"x 24 TPI

XT3PG	955.5001	955.5002	955.5003	955.5004
Meas. range mm	2-6	6-20	20-100	100-300
Type	XT3PG 01M	XT3PG 02M	XT3PG 03M	XT3PG 04M
Thread	1/4"x 40 TPI	5/16"x 40 TPI	5/8"x 24 TPI	5/8"x 24 TPI



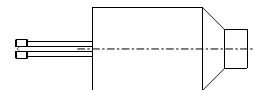
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Bore gauges

Xtreme 3

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

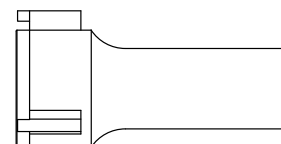
	953.2506	953.2507	953.2508	953.2509	953.2510
Meas. range mm	20-25	25-35	35-50	50-65	65-80
Type	XTHD20	XTHD25	XTHD35	XTHD50	XTHD65
Execution	3 points / TC	3 points / TC	3 points / TC	3 points / TC	3 points / TC

	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 XT3D and XT3H systems.



3 points head

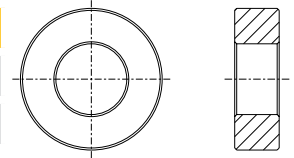
Bore gauges

Xtreme 3

TECHNICAL SPECIFICATIONS SETTING RINGS XTR

		953.2598	953.2599	953.2600	953.2601	953.2602	953.2603
Size	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
Size	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
Description		Stand	Depth stop
Meas. range	mm	2-50	2-6

APPLICATIONS



Pistol measuring system



Measuring with ratchet XTD system



Measuring with pistol XTH system

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High accuracy internal measurement

Ultima

DESCRIPTION

- Measuring range from 2 to 310 mm
- Resolution up to 0.0001 mm
- Mechanical repeatability : 1µm from 2 to 60 mm, 1.5µm from 60 to 210 mm and 2µm 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 12 to 310 mm
- Compatible with all Sylvac digital display
- 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

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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⁾
- Certificate

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⁾
- Instruction manual + certificate

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 through RS232



Two Ultima gauges connected with one unit
Sylvac D50S only



Adjustable depth stop (on request)



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

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 :

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Grooves and slots head



Spherical anvils head



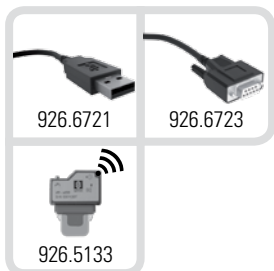
Threads measuring head



Ball screw head



PROXIMITY



Built-in
Bluetooth