



HIGH PRECISION

SCAN SYSTEMS

Optical Measuring Machines For Turned Parts



COMPLETE METALWORKING SOLUTIONS

(800) 991-4225

www.ahbinc.com

ISO Certified

customerservice@ahbinc.com

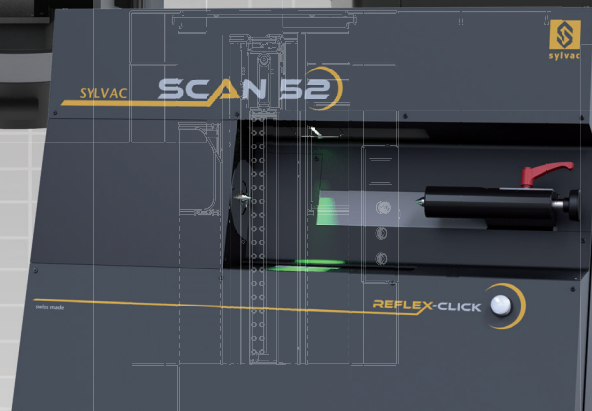
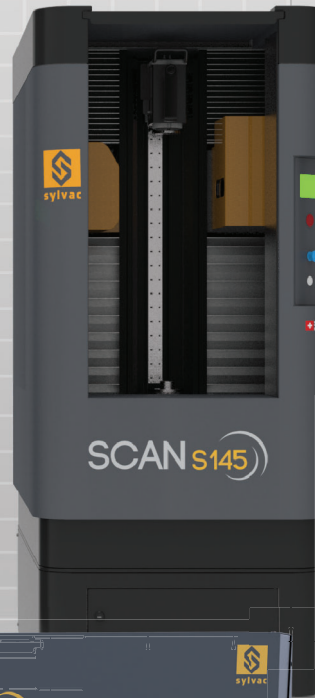
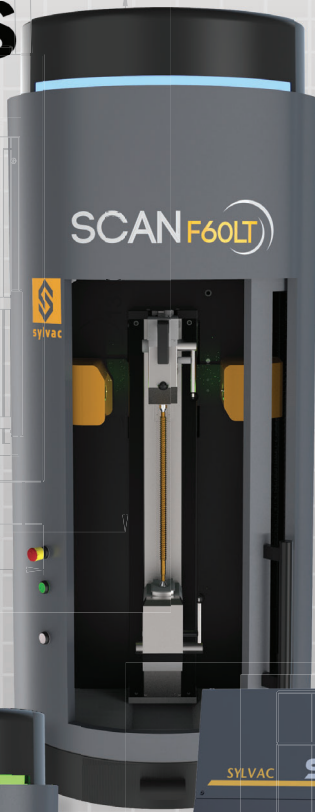


**SWISS
MADE**

800 / 1000 (access)
(door opened)

192

725



Fast and precise optical dimensional measurement for all cylindrical parts!

www.fowlerprecision.com

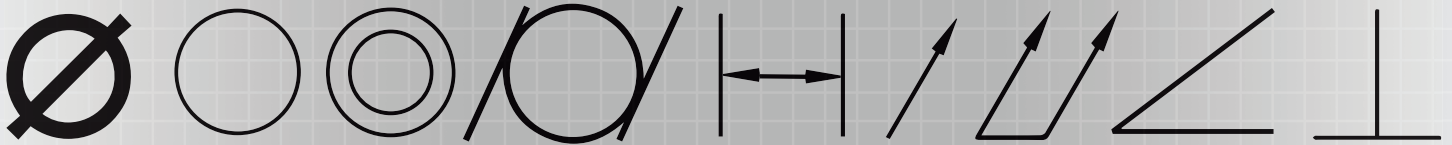
GENERAL FEATURES

APPLICATIONS

Our range of Fowler-Sylvac machines are designed to measure round parts with diameters from 0.2mm up to 14mm and up to 1200mm long. Most cylindrical parts, such as aerospace and automotive shafts and components, connectors, dental screws and implants, hydraulics parts, metal packaging for food and cosmetics, rollers, turbines parts, CNC turned parts, etc. can be measured in a few seconds. Various thread types and features can be measured and analyzed with our machines.



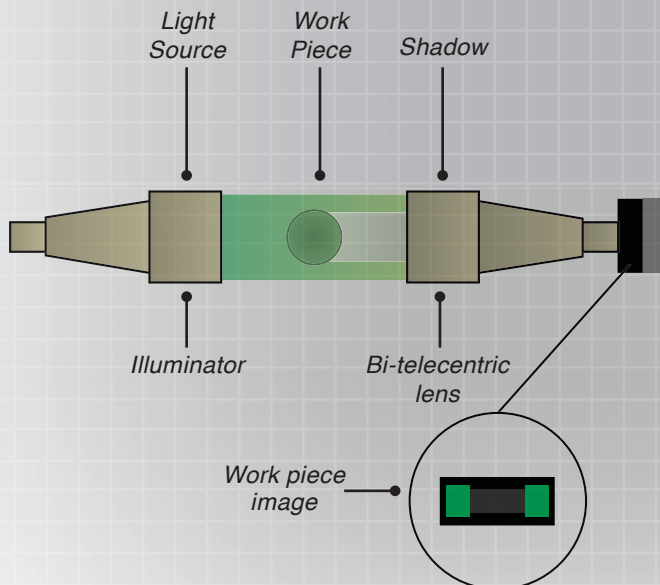
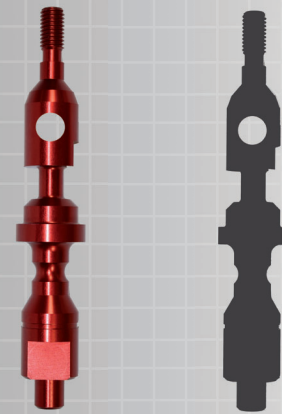
Diameter, circularity, concentricity, cylindricity, parallelism, runout circular, runout total, angulaity, perpendicularity and much more!



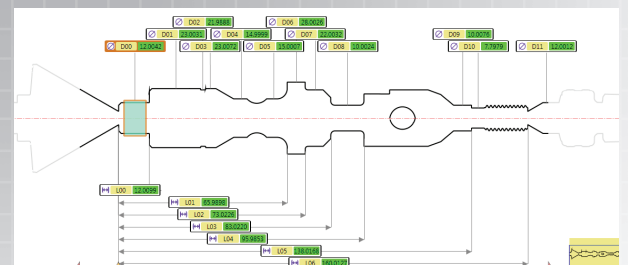
MEASURING PRINCIPLE

All Fowler-Sylvac SCAN machines incorporate high resolution line-scan cameras, which would correspond to a 200 megapixel camera! Using the green LED illuminator to project a collimated beam of light across the part, the part is scanned at speeds up to 100mm/s, while the contour of the part is collected through the high precision bi-telecentric lens system and the projected image is detected and processed using the latest line-scan camera technology.

Workpiece Shadow Image



The contour of the workpiece is reproduced on the software and all the various elements shown can be measured statically (without part rotation) or dynamically (with part rotation) when geometrical features such as run-out or concentricity must be measured.



OPTICAL MACHINES



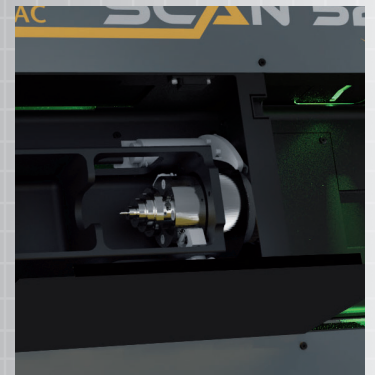
Optical machine specially designed for workshop measurement close to the machine-tool.

Suitable for first-off parts, control in process (SPC), sampling or 100% inspection, our Sylvac SCAN machines are set to revolutionize control in the workshop.

SHOP HARDENED

Sylvac SCAN machines are Swiss made, quality, robust, precision measuring machines designed to work in even the harshest workshop environments. Our machines come with built in calibration masters which are used to keep the machines accuracy and performance within the required specification, compensating for temperature variations.

The F60 and S145 ranges, come with the added value of temperature sensors, used to detect temperature variation and trigger an automatic calibration, which only takes a moment, ensuring the highest precision at all times.



- ✓ Reduce inspection time
- ✓ Reduce scrap
- ✓ Increase productivity
- ✓ Save money
- ✓ Quick return of investment

ONE CLICK MEASUREMENT

REFLEX-CLICK:
The measuring system that makes everyone an expert!

OPERATING PRINCIPLE

SYLVAC - Reflex Scan

The Fowler-Sylvac SCANS are equipped with Reflex SCAN software. This makes them robust and easy to use, allowing perfect integration in workshops. Adjacent to operators, it advantageously replaces conventional measuring systems including multi-gauging thanks to unsurpassed flexibility and time saving.



"Reflex-Click Technology" for one-click measurement!

The cutting edge REFLEX-Click mode measures your parts with a simple click

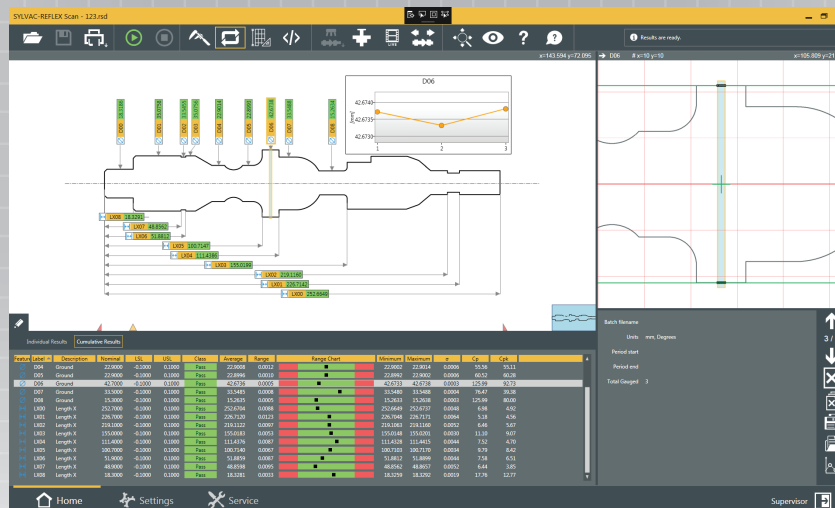


*Reflex Click
The measuring system
that makes everyone
an expert!*

SYLVAC REFLEX SCAN SOFTWARES

1. The operator places the workpiece on the machine
2. The operator clicks on the button
3. The workpiece is scanned, the main values are measured and displayed on the software against the generated work piece drawing.
4. The operator can choose to take the measured values, or edit the suto program, then be ready to measure a series of parts with classification, following the entry of nominal and tolerance information.

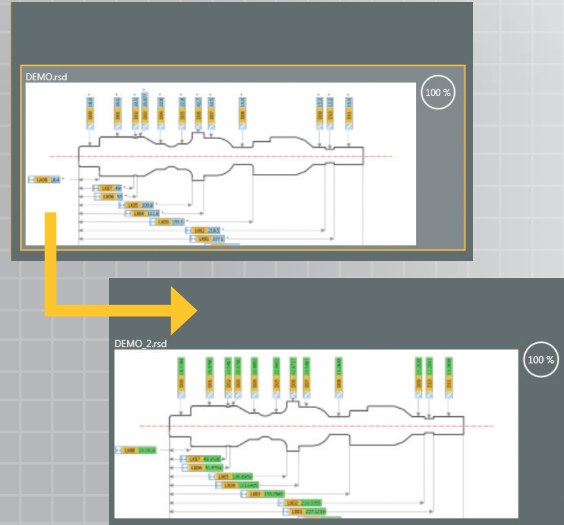
These four operations only take a few minutes!



OPERATING PRINCIPLE

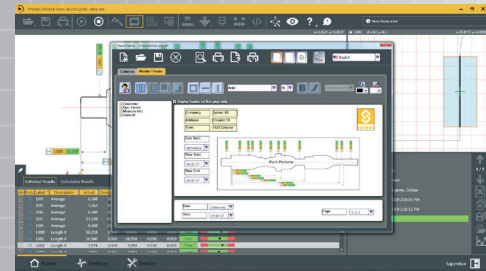
PUSH BUTTON

For repeat work, operators can push the button, the machine will scan the part, recognize the part, then load and execute the measurements according to the program, displaying to the operator classified results.



FLEXIBLE REPORT EDITOR

A flexible report editor is also available, enabling you to customize the presentation of your measuring reports by adding information through a drag & drop method.



STATISTIC VIEW

Statistics view, enabling view of measured results trend, as full screen report or tooltip for quick and easy analysis. (Reflex SCAN+ software only)



SOFTWARE FEATURES

- CAD Software • Statistics View • Automatic Measurement Of The Main Features
- One-Click Measurement • Off-Line Programming • Automatic Part/Program Recognition
- CAD Import/Export • SPC Basic Calculations • BT Connectivity To Sylvac Instruments
- Reports Editor • Advanced Thread Measurement • Advanced Dust Filtering • Easy-To-Use
- Access Management-Security Level • Script Function • Data Export • Easy-To-Read Results

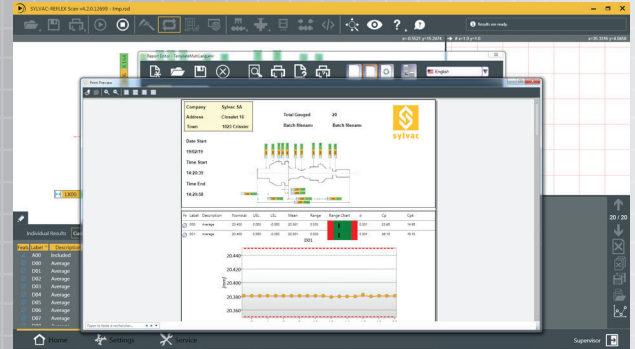
OPERATING PRINCIPLE

DATA EXPORT & SPC

Although main statistical calculations are included as a standard feature in our software packages, you may wish to use your own SPC (Statistical Process Control) software to control your part batches.

For this reason we offer you several export formats (e.g. CSV, QDAS...) that can be imported into your own system.

As an option, you can also use an SPC software for more advanced statistical analysis



SPC SOFTWARE

Some applications require additional measurements such as internal diameters that cannot be performed by a SYLVAC-SCAN. SPC softwares make it possible by enabling you to add some measurements taken from complementary products (e.g. internal micrometers, calipers or dial gages) into the same report.

SPC Software Key Features

- Graphics with limits
- Histograms
- Statistic parameters
- Control charts
- Protocols



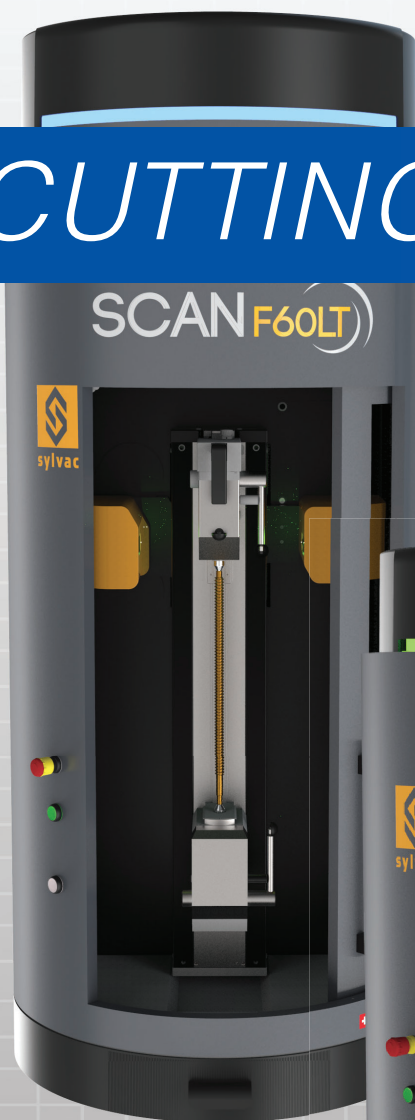
INTEGRATED MEASUREMENT

For the additional measurements required that the SCAN machine cannot measure, such as an internal diameter, Fowler can provide a selection of hand tools, such as calipers, indicators and internal micrometers.

These Fowler hand tools can be linked to the SCAN machine via our renowned *Bluetooth*[®] technology, providing a complete part measurement all in one report and sequence.



CUTTING EDGE



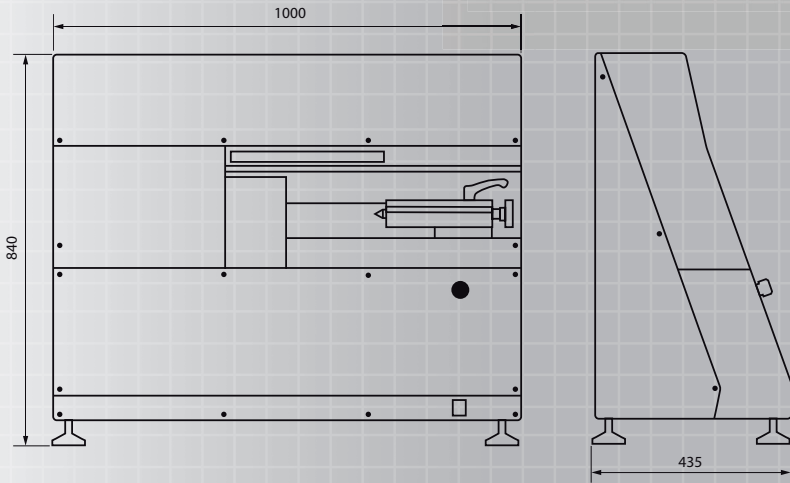
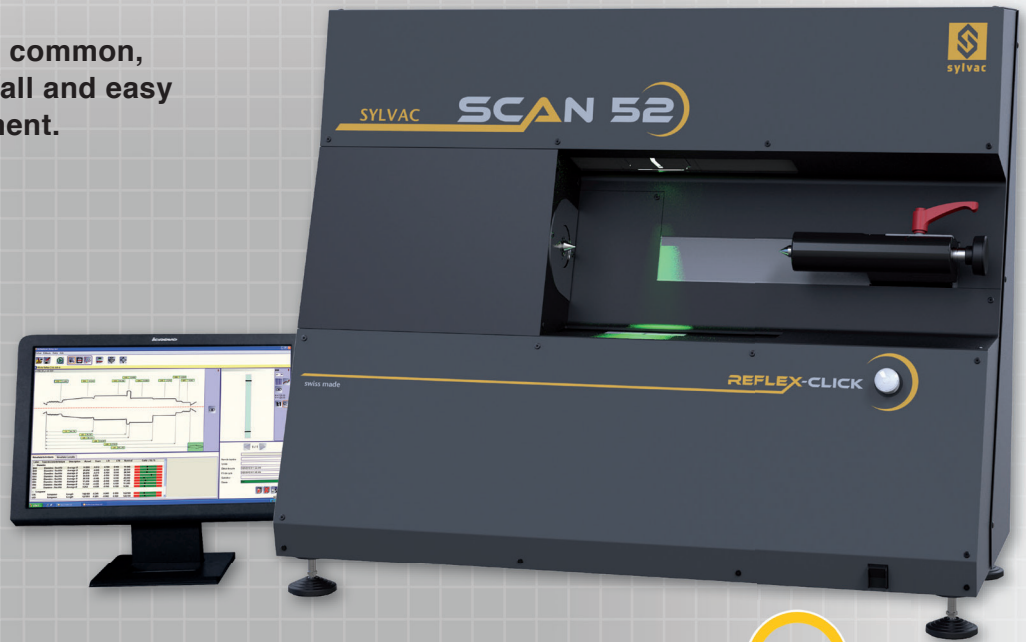
 **SWISS
MADE**

SCAN 52 - Reflex Click

Designed to measure standard, common, cylindrical parts, accessible to all and easy to use with one click measurement.

Features:

- Landscape design
- Integrated calibration mater
- Easy-to-use
- Reflex click technology
- SPC basic



ONE CLICK MEASUREMENT



INCLUDES

- Instrument according to technical specifications
- Accessories: 54-902-620-0, 54-902-616-1, 54-902-621-1
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN software
- Platform case for optical machines
- Manual

TECHNICAL SPECIFICATIONS

	54-902-552-0		54-902-552-1	
	Diameter	Length	Diameter	Length
Measuring range (mm)	0.5 ÷ 52	300	0.5 ÷ 52	300
Numerical interval (mm)	0.0001	0.0005	0.0001	0.0005
Accuracy μm	$(1.5 + D/100)$	$(4 + L/100)$	$(1.5 + D/100)$	$(4 + L/100)$
Repeatability μm	0.6	2.5	0.6	2.5
Rotary headstock			√	
Weight kg	103			

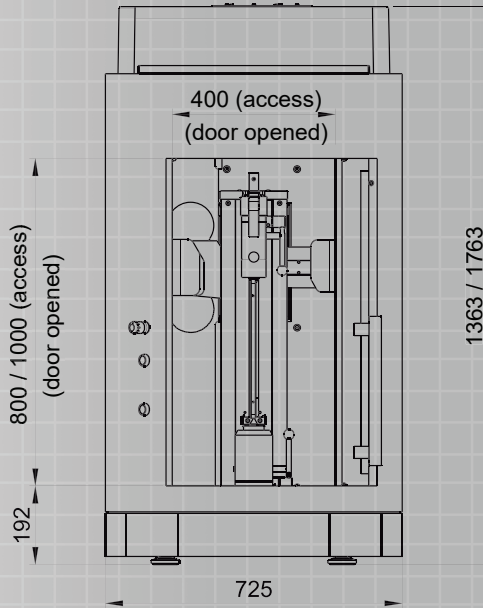


SCAN F60 SERIES

For the more demanding complex parts, such as, splined, geared, interrupted and threaded parts or simply for those that want the best of the best. This new addition to the range offers class leading performance, with a full comprehensive software package with Reflex-Scan+.

Features:

- Single pass rapid scan 100mm/s
- Quick release tooling
- Large LED status light
- Safety light curtain
- Door for cleanliness
- Live image view
- Integrated calibration master and temperature sensors for environmental control
- Reflex click technology
- Tilt axis for advanced thread measurement
- Advanced software features
- Optional custom scripts
- Dust filtering for part contamination
- Statistics view



INCLUDES

- Instrument according to technical specifications
- Accessories: 54-902-620-2, 54-902-616-1, 54-902-621-2
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN+ software
- Platform case for optical machines
- Manual

TECHNICAL SPECIFICATIONS

	SCAN F60 - 54-902-406-0		SCAN F60T - 54-902-406-5		SCAN F60L - 54-902-406-2		SCAN F60LT - 54-902-406-7	
	Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
Measuring range	2.5"/64mm	11.8"/300mm	2.5"/64mm	11.8"/300mm	2.5"/64mm	19.6"/500mm	2.5"/64mm	19.6"/500mm
Resolution	0.000004"/0.0001mm							
Accuracy	Diameter: (1.0 + D/100 μm) / Length: (3 + L/200 μm)							
Repeatability	Diameter: 0.00002"/0.5 μm / Length: 0.00008"/1.8 μm							
Holding Capacity	120mm	315mm	120mm	315mm	120mm	500mm	120mm	500mm
Tilting for Thread Measurement	—		√30°		—		√30°	
Maximum Part Weight	10 kg							
Machine Weight	265 kg				330 kg			

SCAN S145 and S145L

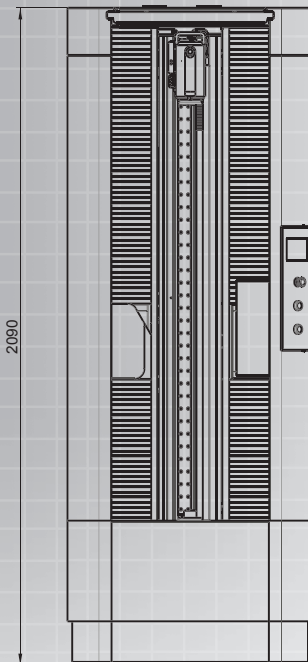
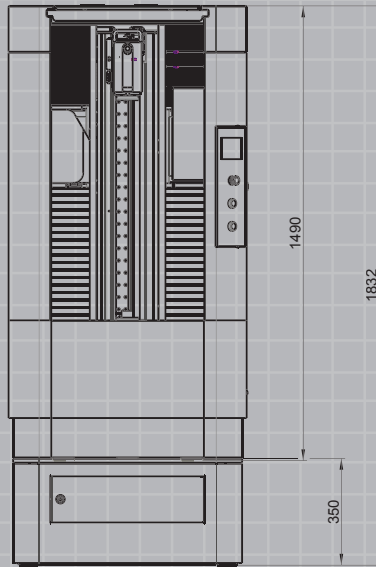
These machines are suitable for larger parts up to 145mm diameter and 1280mm length. They come equipped with the advanced Reflex-Scan+ software and are automation ready.

Features:

- Part measurement up to 145mm diameter and up to 1280mm length
- Fast, accurate, repeatable, reliable measurements of cylindrical parts
- Full part measurement in just a few seconds
- Easy to use software for operator use on the shop floor
- One click measurement, part recognition, auto measure
- Advanced and custom software features for complex parts
- Offline software and programming from CAD
- Full measurement reports and SPC compatible
- Automation ready
- Motorized tailstock
- Reduce inspection time, reduced scrap and save money!

INCLUDES

- Instrument according to technical specifications
- 2 Adapters for Morse 2 , rotating center 42mm 54-902-638-0 and drive center 54-902-621-0
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN+ software
- Platform case for optical machines
- Manual



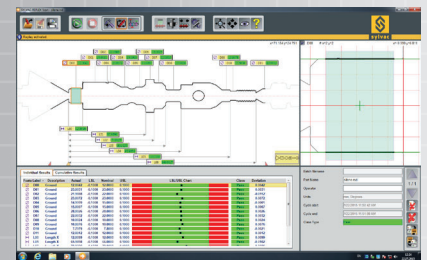
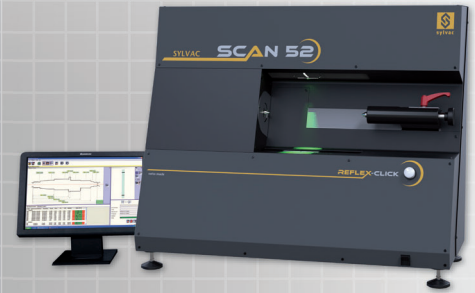
TECHNICAL SPECIFICATIONS

	SCAN S145 - 54-902-145-0		SCAN S145L - 54-902-145-5	
	Diameter	Length	Diameter	Length
Measuring range	5.7"/145mm	0000"/615mm	0000"/145mm	00000"/1280mm
Resolution	Diameter: 0.0001mm / Length: 0.0001mm			
Accuracy	Diameter: (1.5 + D/100 μm) / Length: (4 + L/200 μm)			
Repeatability	Diameter: 0.5 / Length: 1.0 μm			
Holding Capacity	000"/254mm	000"/615mm	000"/254mm	000"/1280mm
Rotary Headstock	✓		✓	
Axial Measuring Speed	80mm/s			
Axial Positioning Speed	up to 200mm/s			
Rotational Meas. Speed	360°/s			
Maximum Part Weight	60 kg			
Machine Weight	530 kg		650 kg	

SPECIFICATIONS OF THE MACHINES

CAPABILITIES

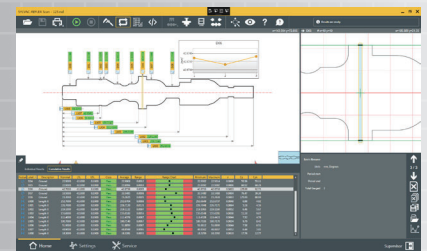
	Reflex SCAN	Reflex SCAN +
Automatic measurement of the main features (diameters, lengths, angles, radii)	✓	✓
Automatic parts / program recognition	✓	✓
Off-line programming		Option
Advanced Dust filtering		✓
CAD import / export		Option / ✓
Reports editor	✓	✓
Data export	✓	✓
SPC basic calculations	✓	✓
SPC software	On request	On request
Access management - security level	1	Multiple
Script function		Option



Reflex SCAN

GEOMETRICAL TOLERANCING FEATURES SUMMARY

	Reflex SCAN	Reflex SCAN +
Diameter	✓	✓
Lengths, Heights, Distances	✓	✓
Angles, Chamfers	✓	✓
Radii	✓	✓
Threads (parallel)	✓	✓
Advanced threads measurement (root detail, taper, multistarts, ball screws, worm screws, special threads)		✓
Perpendicularity		✓
Form Deviation		✓
Rotational Diameters	Basic	Advanced
Run Out	Basic	Advanced
Concentricity	Basic	Advanced
Roundness	✓	✓
Cylindricity	✓	✓
Across Flats	✓	✓
Straightness		✓
Interrupted Parts (splines, turbines)		✓



Reflex SCAN+



INVESTMENT

SCAN MACHINES QUICK RETURN ON INVESTMENT

Because the return of investment is essential data to make sensible decisions, SYLVAC has developed an interface enabling you to calculate your estimated payback time. It will directly depend on the profile of your company and the expected use of the machine. You will therefore be able to validate yourself, that your payback time will be no longer than 6 months in most cases. Moreover, the quality of your measurements will be improved!

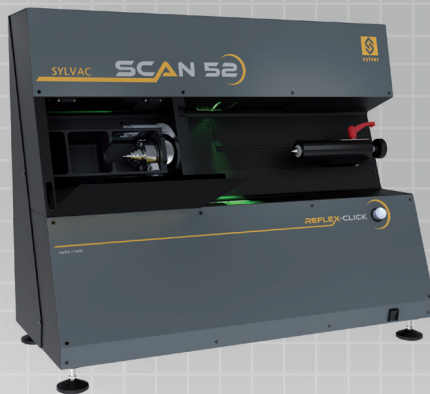


TRADITIONAL MANUAL METHODS USING MULTIPLE GAGES



10 - 30 minute inspection time

SYLVAC SCAN SERIES



*30 - 60 seconds inspection time = **COST SAVINGS!***

TAILOR-MADE SOLUTIONS

CLAMPING SOLUTIONS

Apart from our standard range of fixtures, customised solutions can be developed to optimise your measuring process.

SOFTWARE

Thanks to the Reflex SCAN+ and its flexible open script option, custom software features and macros can be created.



SCAN F60 with Robot

AUTO-LOADING PARTS INTEGRATION

To offer maximum flexibility and increase production levels, the SYLVAC-SCAN can be integrated into your workshop with various equipment, such as a robot arm.

APPLICATIONS

Packaging



Medical



Watch Industry



Plastics



Threads



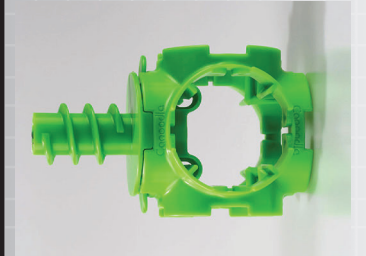
Connectors



Munitions



Injection Moulding



Cosmetics



Plumbing



Hydraulic



Pneumatic



Automotive



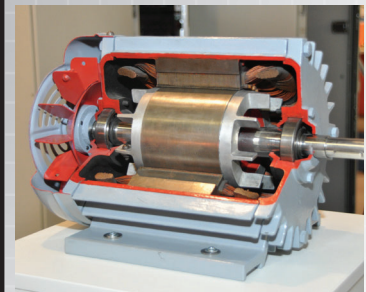
Aerospace



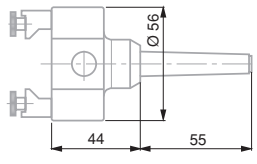
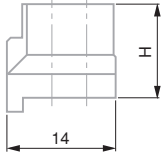
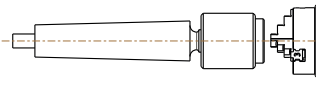
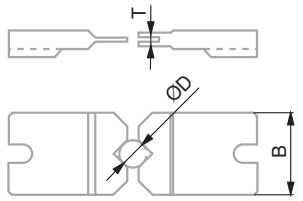
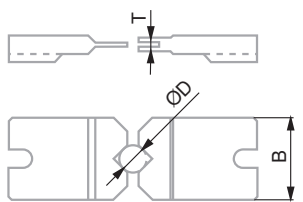
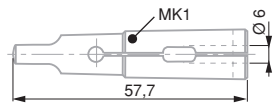
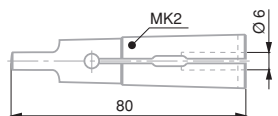
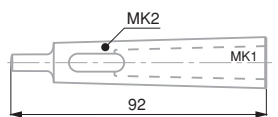
Pharma



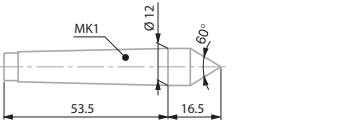
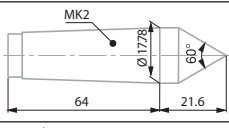
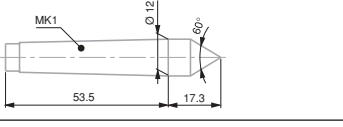
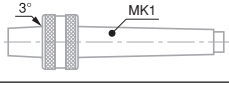
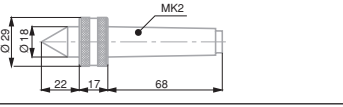
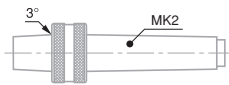
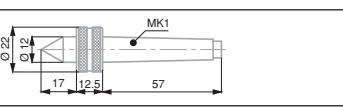
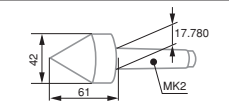
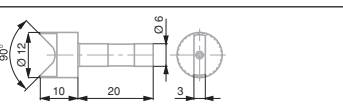
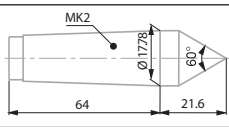
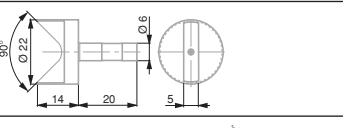
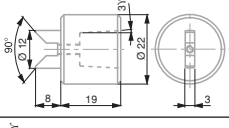
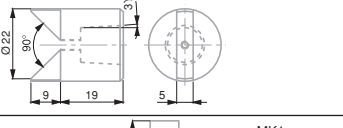
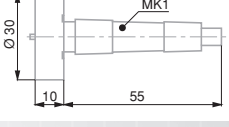
Electro Motors



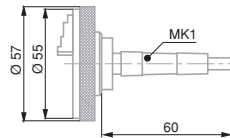
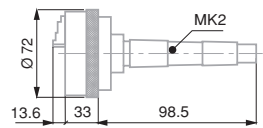
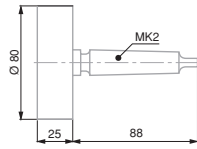
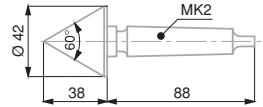
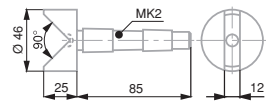
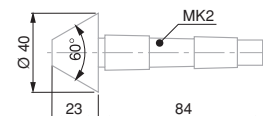
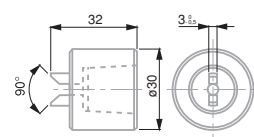
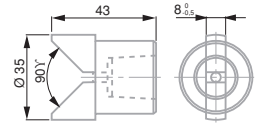
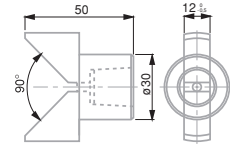
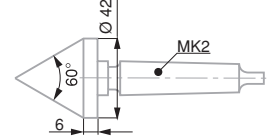
ACCESSORIES

Part Number	Description	SCAN 52/F60	SCAN S145	
54-902-622-0	Two-jaw gripper External clamping for manual use	✓ Requires 54-902-636-0	✓ Requires 54-902-626-0 and 54-902-636-0	
54-902-623-1	Rising blocks for external jaws in pairs	✓ Requires 54-902-622-0	✓ Requires 54-902-622-0	
54-902-622-8	Magnetic clamping plate Ø 0-24mm	✓	✓ Requires 54-902-626-0	
54-902-614-1 0 - 6 mm T = 1.5	External jaws, in pairs	✓ For 54-902-622-0	✓	
54-902-614-2 0 - 6mm T = 3				
54-902-614-3 6 - 12mm T = 3				
54-902-614-4 12 - 18mm T = 6				
54-902-614-5 18 - 24mm T = 9				
54-902-615-2 0 - 6mm T = 6				
54-902-615-3 0 - 6mm T = 15				
54-902-614-0 6 - 12mm T = 15				
54-902-615-4	External jaws, in pairs	✓	✓	
Set with: 54-902-616-4 54-902-617-4 54-902-618-4 54-902-619-4 54-902-620-4	54-902-614-1: Jaws dia. 0 - 6mm, T1 = 1.5mm 54-902-614-2: Jaws dia. 0 - 6mm, T1 = 1.3mm 54-902-614-3: Jaws dia. 6 - 12mm, T1 = 3mm 54-902-614-4: Jaws dia. 12 - 18mm, T1 = 6mm 54-902-614-5: Jaws dia. 18 - 24mm, T1 = 9mm			
54-902-625-0	Center adapter with a 6mm dia. coupling bore, length 57.7mm	Only for Morse 1		
54-902-625-1	Center adapter with a 6mm dia. coupling bore, length 80mm	✓	✓ Requires 54-902-626-0	
54-902-636-0	Reduction sleeve, Morse 2 to 1	✓	✓ Requires 54-902-626-0	

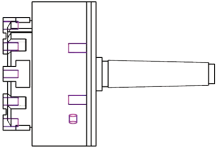
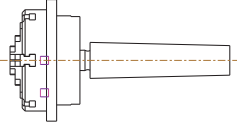
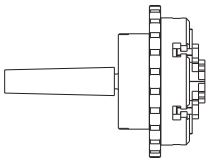
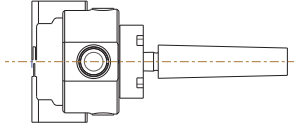
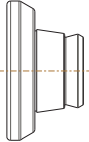
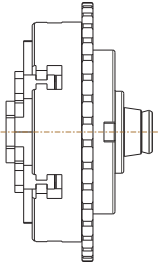
ACCESSORIES

	Part Number	Description	SCAN 52/F60	SCAN S145
	54-902-600-0	Extra male center, 10mm (2 items provided with Sylvac SCAN 52)	Only for Morse 1	
	54-902-620-2	Extra male center, 17.78mm (2 items provided with Sylvac SCAN F60 and Sylvac SCAN 52 Reflex-Click)	✓ Standard	✓ Requires 54-902-626-0
	54-902-620-3	Drive centre (Diamond coated 10mm)	Only for Morse 1	
	54-902-616-0	Rotation center with a B12 male taper plus a Morse 1 taper shank (For added sleeves 54-902-620-6/54-902-620-7)	Only for Morse 1	
	54-902-616-1	Rotation center, Morse 2 (1 item provided with Sylvac SCAN F60 and Sylvac SCAN 52 Reflex-Click)	✓	✓ Requires 54-902-626-0
	54-902-616-2	Rotation center with a B18 male taper and a Morse 2 shank	✓	✓ Requires 54-902-626-0
	54-902-616-3	Rotation center, Morse 1	Only for Morse 1	
	54-902-638-0	Rotation center, Morse 2	✓	✓ Requires 54-902-626-0
	54-902-620-4	Female center, 10mm dia.	✓ Requires 54-902-625-1 (also for Morse 1, w/ 54-902-625-0)	✓ Requires 54-902-626-0 and 54-902-625-1
	54-902-621-2	Extra male center, 17.78mm, diamond coated (1 item provided with Sylvac SCAN F60 Sylvac SCAN 52 Reflex-Click)	✓ Standard	✓ Requires 54-902-626-0
	54-902-620-5	Female center, 20mm dia.	Requires 54-902-625-1 (Morse 1 requires 54-902-625-0)	✓ Requires 54-902-626-0 and 54-902-625-1
	54-902-620-6	Female center, 10mm dia. Also with internal B12 taper	Only for Morse 1 requires 54-902-616-0	
	54-902-620-7	Female center, 12mm dia. Also with internal B12 taper	Only for Morse 1 requires 54-902-616-0	
	54-902-620-8	Plate, 30mm dia.	Only for Morse 1	



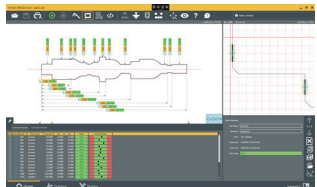
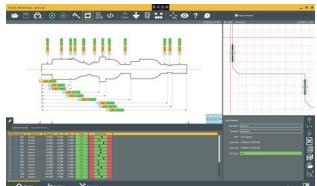

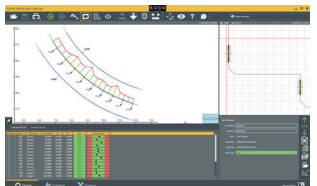
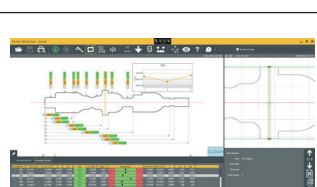
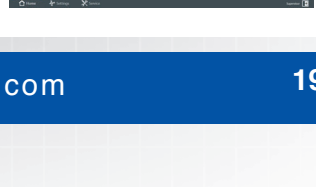
ACCESSORIES

Part Number	Description	SCAN 52/F60	SCAN S145	
54-902-630-0	3-jaw chuck, clamping range 1 - 15mm (Clamping capacity: outside 1 - 15mm, inside: 11 - 26mm)	✓ Requires 54-902-636-0 (also for Morse 1)		
54-902-630-1	3-jaw chuck with Morse 2 taper shank, clamping rang 2 - 50mm (Clamping capacity: outside 2 - 50mm, inside 23 - 50mm)	✓	✓ Requires 54-902-626-0	
54-902-620-9	Plate, 80mm dia. with a Morse 2 taper shank	✓	✓ Requires 54-902-626-0	
54-902-621-0	Drive centre, Ø 40mm, diamond coated with a Morse 2 taper shank	✓	✓ Requires 54-902-626-0	
54-902-634-0	Female centre, 40mm dia. with a Morse 2 taper shank	✓	✓ Requires 54-902-626-0	
54-902-634-1	Female centre, 40mm dia. with a Morse 2 taper shank	✓ Requires 54-902-616-2	✓ Requires 54-902-626-0	
54-902-631-0	Female centre, 10mm dia. with a B18 internal taper	✓ Requires 54-902-616-2	✓ Requires 54-902-626-0 and 54-902-616-2	
54-902-631-1	Female centre, 30mm dia. with a B18 internal taper	✓ Requires 54-902-616-2	✓ Requires 54-902-626-0 and 54-902-616-2	
54-902-631-2	Female centre, 45mm dia. with a B18 internal taper	✓ Requires 54-902-616-2	✓ Requires 54-902-626-0 and 54-902-616-2	
54-902-641-0	Drive centre - diamond coated, 42mm dia. max.	✓	✓ Requires 54-902-626-0	

ACCESSORIES

	Part Number	Description	SCAN 52/F60	SCAN S145
	54-902-660-8	Option I/O for robotization	✓	
	54-902-630-2	Pneumatic 4 jaw chuck Ø 1 - 63mm	✓	✓ Requires 54-902-626-0
	54-902-630-4	6 jaw chuck Ø 1.5 - 54mm	✓	✓ Requires 54-902-626-0
	54-902-630-5	6 jaw chuck Ø 2 - 89mm	✓	✓ Requires 54-902-626-0
	54-902-627-0	2 jaw chuck Ø 0 - 18mm	✓	✓ Requires 54-902-626-0
	54-902-626-0	Adapter for Morse 2		✓
	54-902-626-1	6 jaw chuck Ø 1 - 220mm		✓
	54-902-626-1	3 jaw chuck Ø 1 - 220mm		✓

SOFTWARE

Part Number	Description	SCAN52	SCAN F60(L)(T)	SCAN S145	
—	Sylvac Reflex SCAN Standard (Delivered with 54-902-552-0 and 54-902-552-1)	✓			
—	Sylvac Reflex SCAN+ Standard (Delivered with 54-902-406-0 and 54-902-406-2, 54-902-406-5 and 54-902-406-7)		✓	✓	
54-902-701-5	Sylvac Reflex SCAN+ Offline		✓	✓	
54-902-701-6	Sylvac Reflex SCAN+ Option script programming		✓	✓	
54-902-701-7	Sylvac Reflex SCAN+ Option OPC-UA Robot		✓	✓	
54-902-701-8	Sylvac Reflex SCAN+ Option CAD compare		✓	✓	
54-902-702-0	Sylvac Reflex SCAN+ Option CAD compare - Offline		✓	✓	
54-902-702-1	Reflex-SCAN+ "PRO" with advanced feature wizards to build custom features and threads		✓	✓	

ADDITIONAL ACCESSORIES

	Part Number	Description	SCAN52	SCAN F60(L)(T)	SCAN S145
	54-902-660-0	Table for machine (85 x 85 x 70cm)		✓	
	54-902-660-1	Furniture for SYlvac SCAN F60 storage for PC, drawer with lock and arm for keyboard and screen		✓	
	54-902-660-5	Height-adjustable table (71 - 1140mm) for keyboard, screen and mouse (80 x 60)		✓	
	54-902-660-7	Accessories tidy insert for drawer (combined with 54-902-660-1)		✓	
	54-928-600-6	Plastiform case for Sylvac SCAN & Visio (standard delivery with all SCAN & Visio)	✓	✓	✓
	54-902-660-9	Rack for tools	✓	✓	✓

UNIVERSAL ROBOTIC ARM

SCAN VERSIONS WITH THE ROBOT

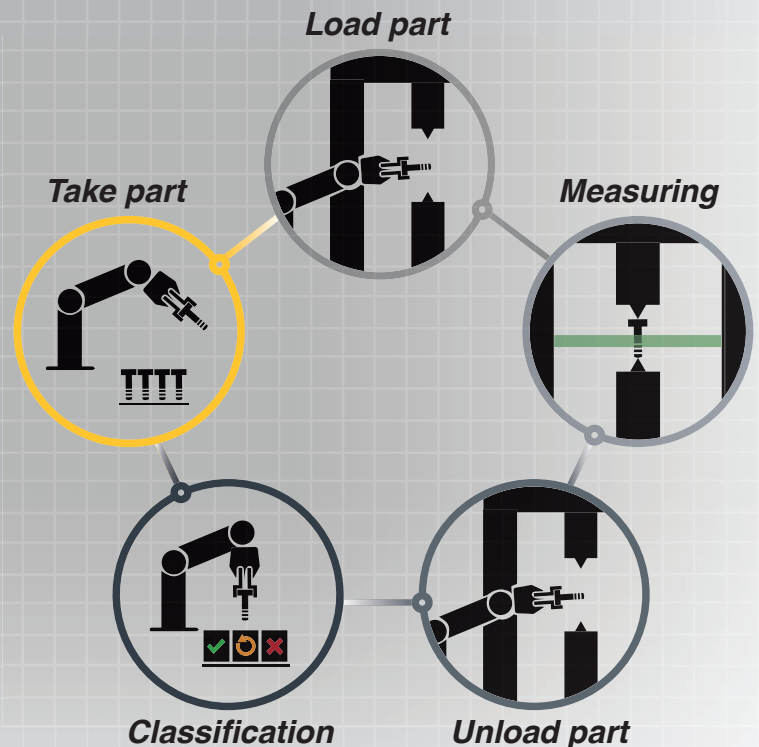
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