

OPTICAL MEASURING MACHINES FOR TURNED PARTS

SYLVAC SCAN



Fast and precise optical dimensional measurement for all cylindrical parts

Discover our range of Sylvac SCAN machines with over 150 measurement features to control the most demanding dimensions and geometrical tolerances.



Easy to use



Super fast

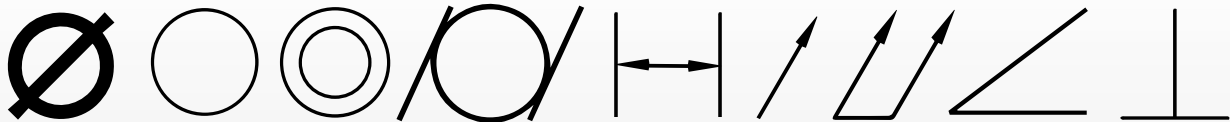


Very quick ROI

GENERAL FEATURES

APPLICATIONS

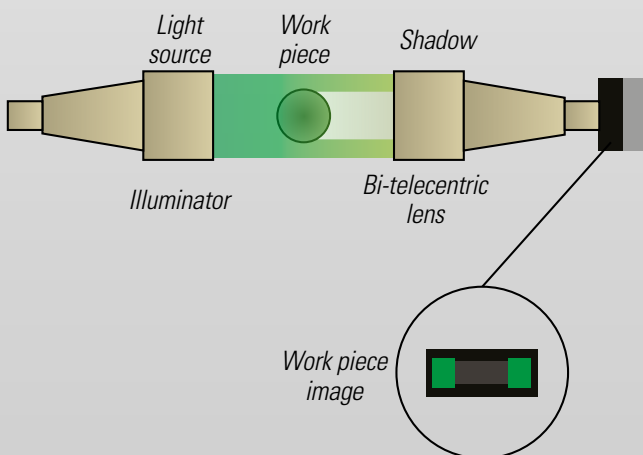
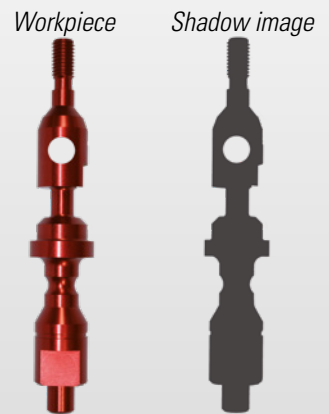
Our range of SYLVAC machines are designed to measure round parts with diameters from 0.2 mm up to 145 mm and up to 1'200 mm long. Most of the cylindrical parts, such as aerospace and automotive shafts and components, connectors, dental screws and implants, hydraulics parts, metal packaging for food and 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.



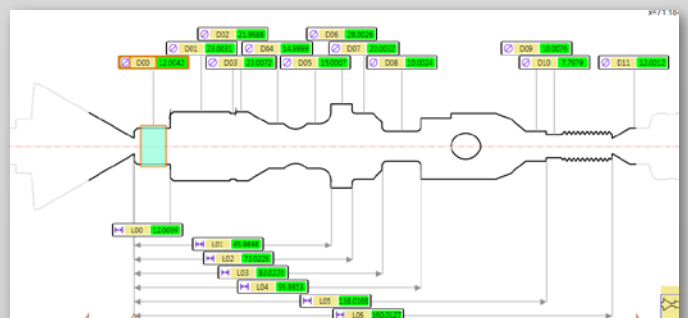
Diameter, circularity, concentricity, cylindricity, parallelism, runout circular, runout total, angularity, perpendicularity and much more.

MEASURING PRINCIPLE

All 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, whilst 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.



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





OPTICAL MACHINES

SYLVAC SCAN

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

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



- **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 !

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, comes with the added value of temperature sensors, used to detect temperature variation and trigger an automatic calibration, which only takes a short moment. Ensuring the highest precision at all times.



OPERATING PRINCIPLE

SYLVAC-REFLEX SCAN

The SYLVAC-SCAN's are equipped with Reflex SCAN software. These make 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 !

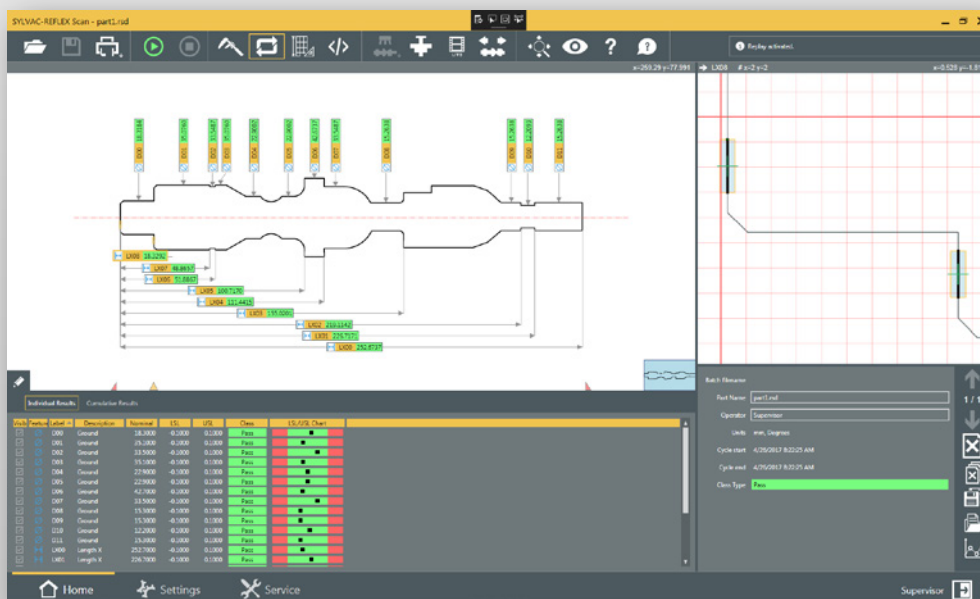
The cutting edge REFLEX-Click mode measures your parts with a simple click.



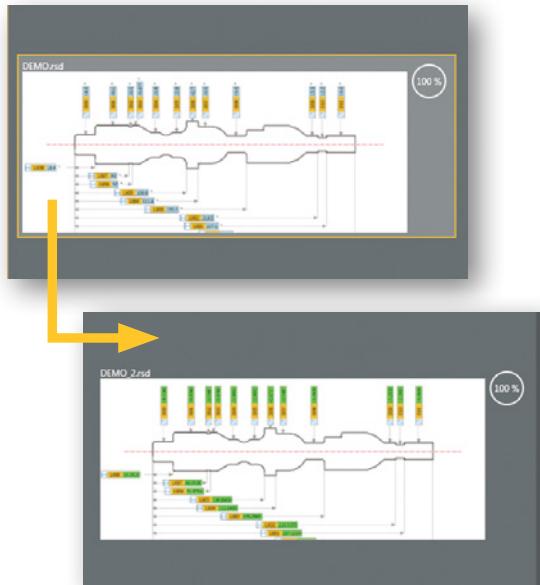
SYLVAC REFLEX SCAN SOFTWARES

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 auto program ready to measure a series of parts with classification, following entry of nominal and tolerance information.

These four operations only take a few minutes.



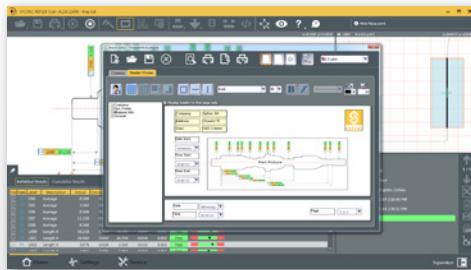
Screenshot of part measurement on Sylvac Reflex SCAN+



Intelligent automatic part recognition

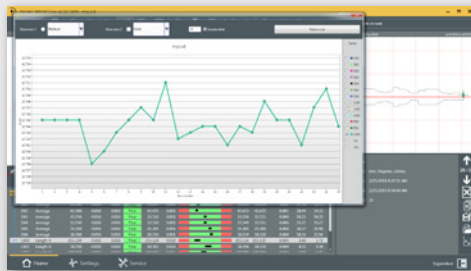
PUSH THE BUTTON !

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

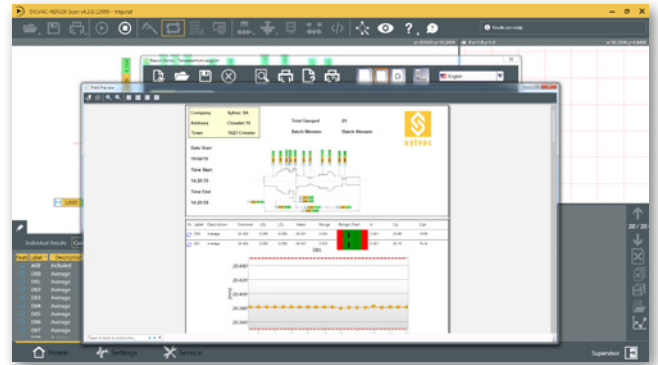
EASY TO READ RESULTS

DATA EXPORT AND SPC

Although main statistical calculations are included as a standard feature in our software packages, you might want 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, Sylvac can provide a selection of hand tools, such as calipers, indicators and internal micrometers.

These Sylvac 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.





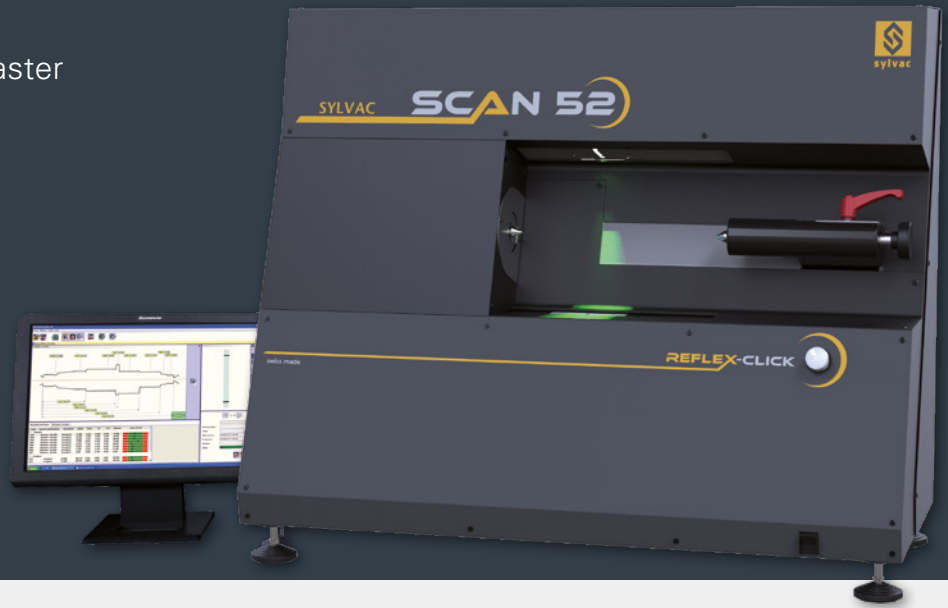
AC

AT THE **CUTTING-EDGE**
OF TECHNOLOGY

SYLVAC-SCAN 52 REFLEX CLICK

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

- Landscape design
- Integrated calibration master
- Easy to use
- Reflex click technology
- Data export
- SPC basic



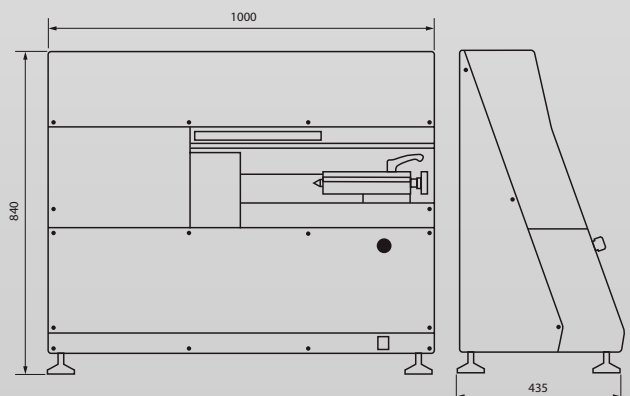
TECHNICAL SPECIFICATIONS

		902.5520 - SCAN 52		902.5521 - SCAN 52 R	
		Diameter	Length	Diameter	Length
Measuring range	mm	0.5 ÷ 52	300	0.5 ÷ 52	300
Resolution	mm	Diameter : 0.0001 / Length : 0.0005			
Accuracy	µm	Diameter : (1.5 + D/100) / Length : (4 + L/100)			
Repeatability 2σ	µm	Diameter : 0.6 / Length : 2.5			
Rotary headstock		-		✓	
Max. part weight	kg	4			
Machine weight	kg	103			



DELIVERY

- Instrument according to technical specifications
- Accessories : 2x 902.6202, 902.6161, 902.6212
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN Software
- Plastiform Case for optical machines
- Manual



SYLVAC-SCAN F60(T) & F60L(T)

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+.

- 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 & 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

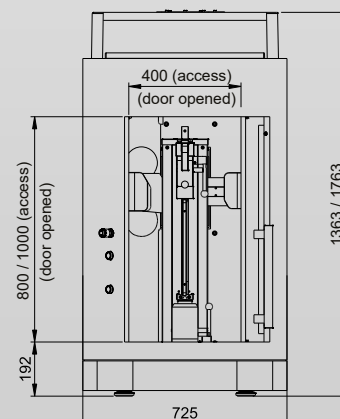


TECHNICAL SPECIFICATIONS

		902.4060 - SCAN F60		902.4065 - SCAN F60T		902.4062 - SCAN F60L		902.4067 - SCAN F60LT	
		Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
Measuring range	mm	64	300	64	300	64	500	64	500
Resolution	mm	0.0001							
Accuracy	µm	Diameter : (1.0 + D/100) / Length : (3 + L/200)							
Repeatability 2σ	µm	Diameter : 0.5 / Length : 1.0							
Holding capacity	mm	120	315	120	315	120	500	120	500
Tilting for thread measurement		-		✓ 30°		-		✓ 30°	
Max. part weight	kg	10							
Machine weight	kg	265				330			

DELIVERY

- Instrument according to technical specifications
- Accessories : 2x 902.6202, 902.6161, 902.6212
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN+ Software
- Plastiform Case for optical machines
- Manual



SYLVAC-SCAN S145 & 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.

- Part measurement from 0.2 to 145mm diameter and up to 1'280mm length
- Motorised tailstock
- Automatisations ready
- Quick release tooling
- LED status light
- Safety light curtain
- Live image view
- Integrated calibration master & temperature sensors for environmental control
- Reflex click technology
- Advanced software features
- Optional custom scripts
- Statistics view

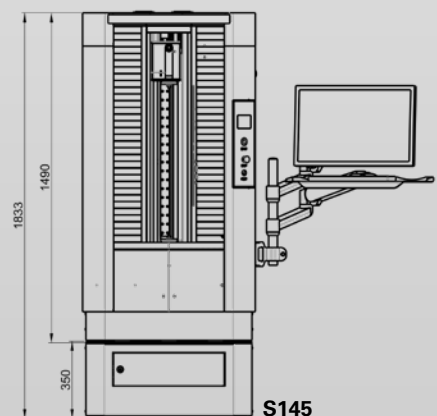


TECHNICAL SPECIFICATIONS

		902.4145 - SCAN S145		902.4147 - SCAN S145L	
		Diameter	Length	Diameter	Length
Measuring range	mm	145	615	145	1280
Resolution	mm	Diameter : 0.0001 / Length : 0.0001			
Accuracy	µm	Diameter : (1.5 + D/100) / Length : (4 + L/200)			
Repeatability 2σ	µm	Diameter : 0.5 / Length : 1.0			
Holding capacity	mm	254	615	254	1280
Rotary headstock		✓		✓	
Axial measuring speed	mm/s	80			
Axial positioning speed	mm/s	up to 200			
Rotational meas. speed	°/s	360			
Max. part weight	kg	60			
Machine weight	kg	530		650	

DELIVERY

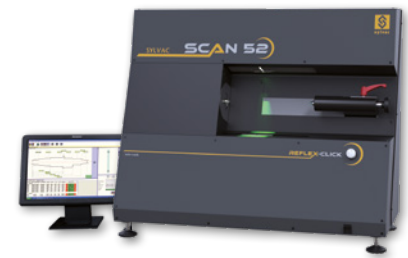
- Instrument according to technical specifications
- 2 Adaptors for Morse 2 (902.6260), rotative centre 42mm (902.6380) et drive centre (902.6210)
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN+ Software
- Plastiform Case for optical machines
- Manual



SPECIFICATIONS OF THE MACHINES

CAPABILITIES

	Sylvac-Reflex SCAN	Sylvac-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



Sylvac-Reflex SCAN

GEOMETRICAL TOLERANCING - FEATURES SUMMARY

	Sylvac-Reflex SCAN	Sylvac-Reflex SCAN+
Diameters	✓	✓
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)		✓



Sylvac-Reflex SCAN+



INVESTMENT

SYLVAC SCAN MACHINES QUICK ROI

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 GAUGES :



SYLVAC-SCAN SERIES :



= 30-60 seconds inspection time = COST SAVING !

TAILOR-MADE SOLUTIONS



CLAMPING SOLUTIONS

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

SOFTWARE

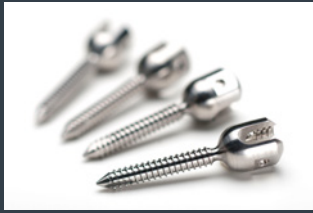
Thanks to the Reflex SCAN+ and its flexible open script option, custom software features and macros can be created.

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



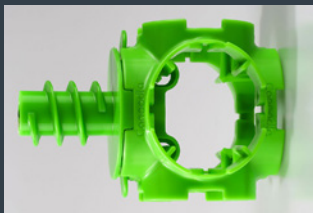
PACKAGING
MEDICAL



WATCH INDUSTRY
PLASTICS



THREADS
CONNECTORS



MUNITIONS
INJECTION MOULING



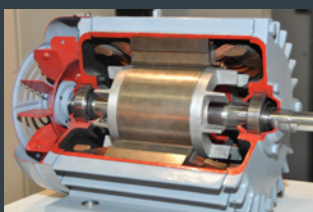
COSMETICS
PLUMBING



HYDRAULIC
PNEUMATIC



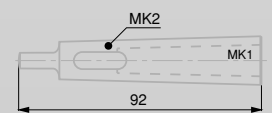
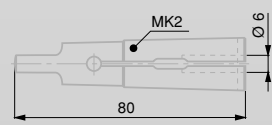
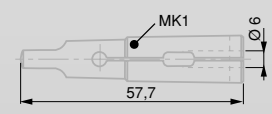
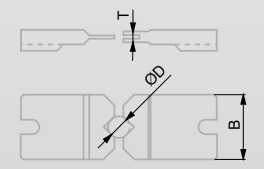
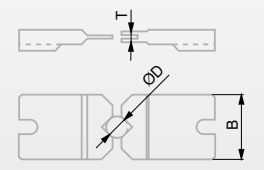
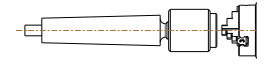
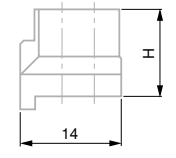
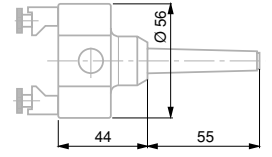
AUTOMOTIVE
AEROSPACE



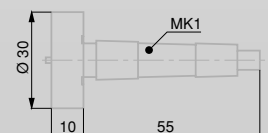
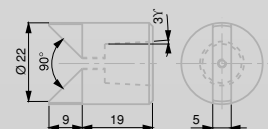
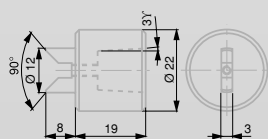
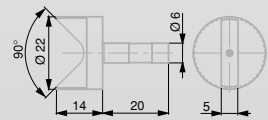
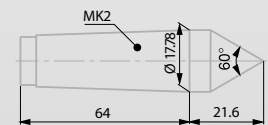
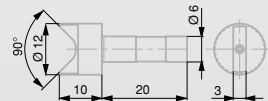
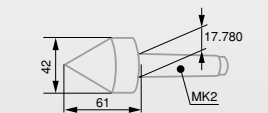
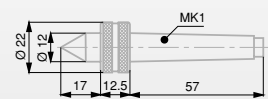
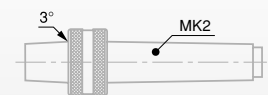
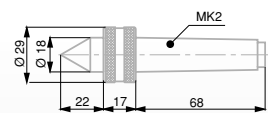
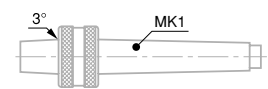
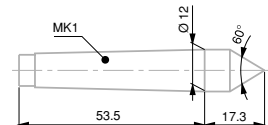
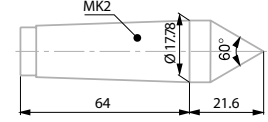
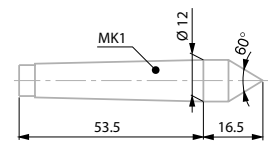
PHARMA
ELECTRO MOTORS

ACCESSORIES

Number	Description	Morse 2 SCAN 52/F60	SCAN S145
902.6220	Two-jaw gripper External clamping for manual use	✓ Requires 902.6360	✓ Requires 902.6260 +902.6360
902.6231	Raising blocks for external jaws, in pairs	✓ (Morse 1 requires 902.6220)	✓ Requires 902.6220
902.6228	Magnetic clamping plate Ø0-24 mm	✓	✓ Requires 902.6260
902.6141 0÷6 mm T = 1.5	External jaws, in pairs	✓ For 902.6220 (also for Morse 1)	✓
902.6142 0÷6 mm T = 3			
902.6143 6÷12mm T = 3			
902.6144 12÷18mm T = 6			
902.6145 18÷24mm T = 9			
902.6152 0÷6mm T = 6			
902.6153 0÷6mm T = 15			
902.6140 6÷12mm T = 15			
902.6154 Set with:	External jaws, in pairs		
902.6141	902.6141 : Jaws dia 0-6mm, T1=1.5mm	✓	✓
902.6142	902.6142 : Jaws dia 0-6mm, T1=1.3mm		
902.6143	902.6143 : Jaws dia 6-12mm, T1=3mm		
902.6144	902.6144 : Jaws dia 12-18mm, T1=6mm		
902.6145	902.6145 : Jaws dia 18-24mm, T1=9mm		
902.6250	Center adapter with a 6 mm dia. coupling bore, length 57.7mm	Only for Morse 1	
902.6251	Center adapter with a 6 mm dia. coupling bore, length 80mm	✓	✓ Requires 902.6260
902.6360	Reduction sleeve, Morse 2 to 1	✓	✓ Requires 902.6260

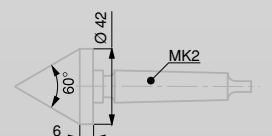
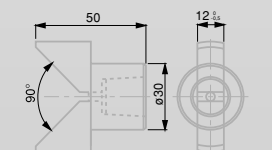
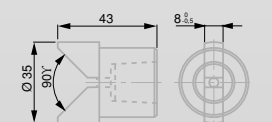
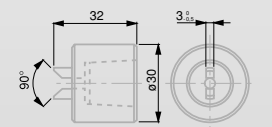
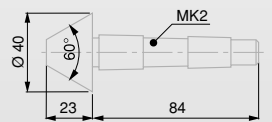
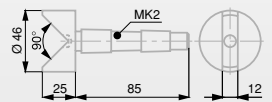
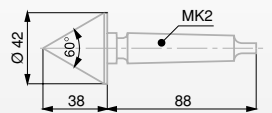
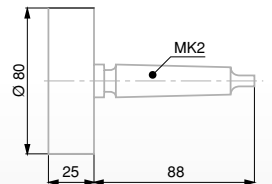
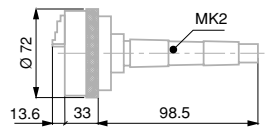
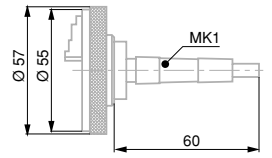


Number	Description	Morse 2 SCAN 52/F60	SCAN S145
902.6000	Extra male center, 10 mm (2 items provided with SYLVAC-SCAN 25)	Only for Morse 1	
902.6202	Extra male center, 17.78 mm (2 items provided with SYLVAC-SCAN F60 and SYLVAC-SCAN 52 Reflex-Click)	✓ Standard	✓ Requires 902.6260
902.6203	Drive centre (Diamond coated 10 mm)	Only for Morse 1	
902.6160	Rotation center with a B12 male taper plus a Morse 1 taper shank (For added sleeves 902.6206/902.6207)	Only for Morse 1	
902.6161	Rotation center, Morse 2 (1 item provided with SYLVAC-SCAN F60 and SYLVAC-SCAN 52 Reflex-Click)	✓	✓ Requires 902.6260
902.6162	Rotation center with a B18 male taper plus a Morse 2 shank	✓	✓ Requires 902.6260
902.6163	Rotation center, Morse 1	Only for Morse 1	
902.6380	Rotation center, Morse 2	✓	✓ Requires 902.6260
902.6204	Female center, 10 mm dia.	✓ Requires 902.6251 (also for Morse 1, with 902.6250)	✓ Requires 902.6260 + 902.6251
902.6212	Extra male center, 17.78 mm, diamond coated (1 item provided with SYLVAC-SCAN F60 and SYLVAC-SCAN 52 Reflex-Click)	✓ Standard	✓ Requires 902.6260
902.6205	Female center, 20 mm dia.	Requires 902.6251 (Morse 1 requires 902.6250)	✓ Requires 902.6260 + 902.6251
902.6206	Female center, 10 mm dia. Also with internal B12 taper	Only for Morse 1 (requires 902.6160)	
902.6207	Female center, 12 mm dia. Also with internal B12 taper	Only for Morse 1 (requires 902.6160)	
902.6208	Plate, 30 mm dia.	Only for Morse 1	

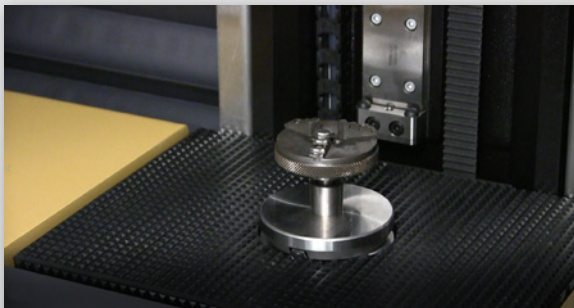
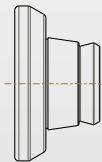
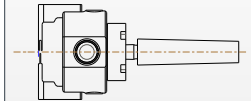
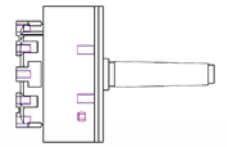


ACCESSORIES

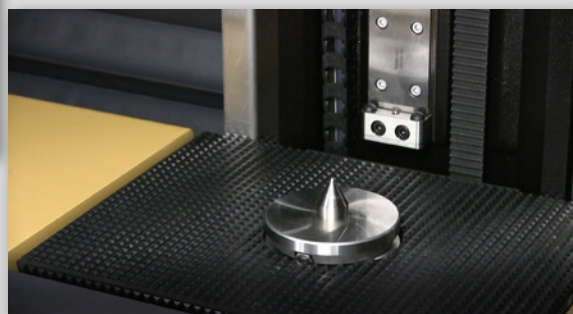
Number	Description	Morse 2 SCAN 52/F60	SCAN S145
902.6300	3-jaw chuck, clamping range 1÷15 mm (Clamping capacity: outside 1÷15 mm inside 11÷26 mm)	✓ Requires 902.6360 (also for Morse 1)	
902.6301	3-jaw chuck with Morse 2 taper shank, clamping range 2÷50 mm (Clamping capacity: outside 2÷50 mm inside 23÷50 mm)	✓	✓ Requires 902.6260
902.6209	Plate, 80 mm dia. with a Morse 2 taper shank	✓	✓ Requires 902.6260
902.6210	Drive centre, Ø 40 mm. Diamond coated with a Morse 2 taper shank	✓	✓ Requires 902.6260
902.6340	Female centre, 40 mm dia. with a Morse 2 taper shank	✓	✓ Requires 902.6260
902.6341	Female centre, 40 mm dia. with a Morse 2 taper shank	✓ Requires 902.6162	✓ Requires 902.6260
902.6310	Female center, 10 mm dia., with a B18 internal taper	✓ Requires 902.6162	✓ Requires 902.6260 + 902.6162
902.6311	Female center, 30 mm dia., with a B18 internal taper	✓ Requires 902.6162	✓ Requires 902.6260 + 902.6162
902.6312	Female center, 45 mm dia., with a B18 internal taper	✓ Requires 902.6162	✓ Requires 902.6260 + 902.6162
902.6410	Drive centre - diamond coated, 42 mm dia. max.	✓	✓ Requires 902.6260



Number	Description	Morse 2 SCAN 52/F60	SCAN S145
902.6608	Option I/O for robotisation	✓	
902.6302	Pneumatic 4 jaw chuck Ø 1-63mm	✓	✓ Requires 902.6260
902.6270	2 jaw chuck Ø 0-18mm	✓	✓ Requires 902.6260
902.6260	Adaptor for Morse 2 (MK2)		✓



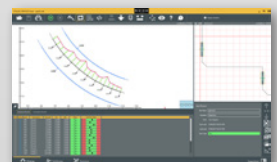
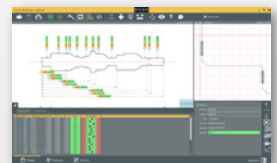
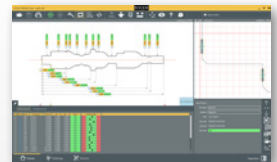
Adaptor for Morse 2 and chuck



Adaptor for Morse 2 and male center

SOFTWARES

Number	Description	52	F60(L)(T)	S145
***	Sylvac Reflex SCAN Standard (delivered with 902.5520 & 902.5521)	✓		
***	Sylvac Reflex SCAN+ Standard (delivered with 902.4060, 902.4062, 902.4065 & 902.4067)		✓	✓
902.7015	Sylvac Reflex SCAN+ Offline		✓	✓
902.7016	Sylvac Reflex SCAN+ Option Script programming		✓	✓
902.7017	Sylvac Reflex SCAN+ Option OPC-UA Robot		✓	✓
902.7018	Sylvac Reflex SCAN+ Option CAD compare		✓	✓
902.7020	Sylvac Reflex SCAN+ Option CAD compare Offline		✓	✓
902.7021	Reflex-Scan+ "PRO" With advanced feature wizards to build custom features and threads		✓	✓



OTHERS ACCESSORIES

Number	Description	52	F60(L)(T)	S145
902.6012	Gold demo part	✓	✓	✓
902.6013	Gold part for threads demonstration		✓	✓
902.6014	Gold demo part XL			✓
902.6600	Table for machine (85x85x70cm)		✓	
902.6601	Furniture for Sylvac SCAN F60 storage for PC, drawer with lock and arm for keyboard and screen		✓	
902.6605	Height-adjustable table (71-1140mm) for keyboard, screen and mouse (80x60)		✓	
902.6607	Accessories tidy insert for drawer (combined with 902.6601)		✓	
928.6006	Plastiform case for Sylvac SCAN & Visio (standard delivery with all SCAN & Visio machines)	✓	✓	✓
902.6609	Rack for tools	✓	✓	✓



VERSIONS WITH ROBOT

DO YOU NEED AN EXTRA HAND ?

Our Sylvac SCAN range can be fully automated with an universal robot that can load all your workpieces for you directly on the machine for measurement.

- Quality control for your shafts just got easier !
- The Sylvac-Scan range of optical measuring centres, now available fully automated
- Rapid automatic part loading/unloading, classification feedback for specified drop location
- Machine tool feedback for part correction / offsets



Example of SCAN 52 with robot



Example of SCAN F60 with robot

MEASURING TURNED PARTS HAS NEVER BEEN SO EASY !

