sylvac

Sylvac Scan

OPTICAL MEASURING MACHINES FOR TURNED PARTS

NEW !

SCAN F60T

SCAN F60LT

FAST AND PRECISE OPTICAL DIMENSIONAL MEASUREMENT FOR ALL CYLINDRICAL PARTS

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

SYLVAC **SCAN 52**

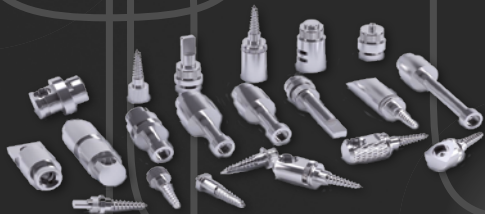REFLEX-CLICK

Swiss manufacturer of precision digital measuring instruments since 1969, SYLVAC has now added a new range of optical machines to its manufacturing program.

EASY

SUPER FAST

VERY QUICK ROI

+ SWISS MADE

# General features

APPLICATIONS

Our range of SYLVAC's machines are designed to measure round parts with diameters from 0.2 mm up to 64 mm and up to 500 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.

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.

WORKPIECE   SHADOW IMAGE

LIGHT SOURCE   WORK PIECE   SHADOW

ILLUMINATOR   BI-TELECENTRIC LENS
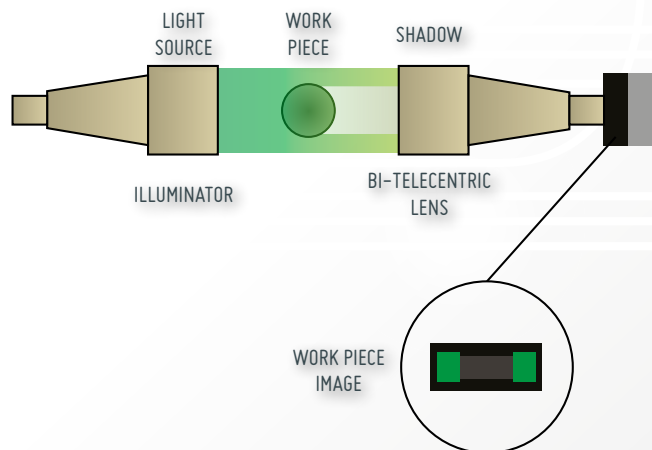
WORK PIECE IMAGE

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.
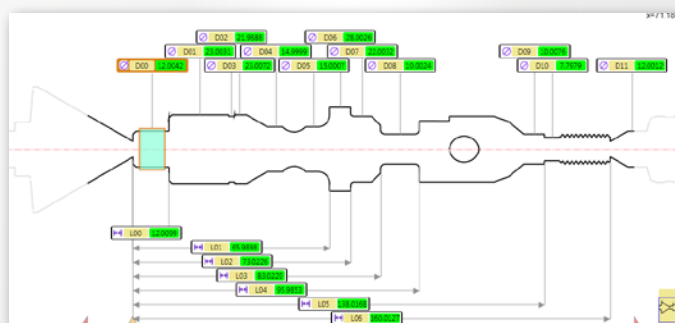
Optical machines

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**

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 range, 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.

**Measuring only in a few seconds !**
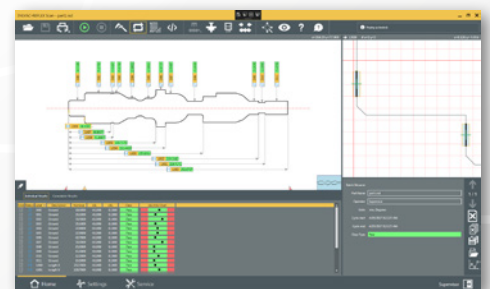
PUSH THE BUTTON !

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.

Intelligent automatic recognition of your existing parts/programs

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.
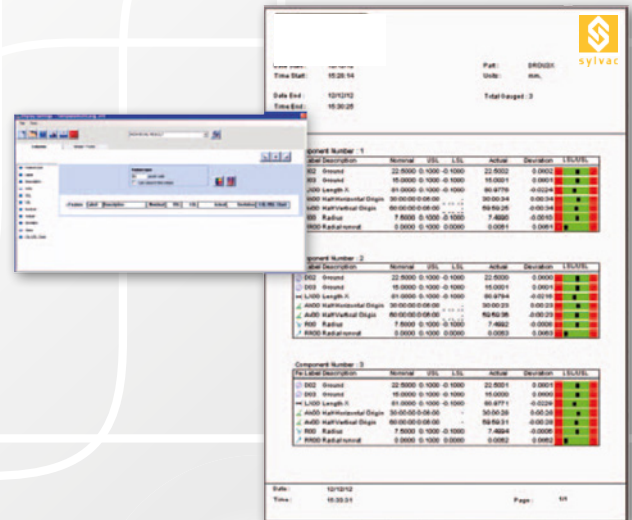
STATISTIC VIEW

Statistics view, enabling view of measured results trend, as full screen report or tooltip for quick and easy analysis.
Available for F60 machines only.
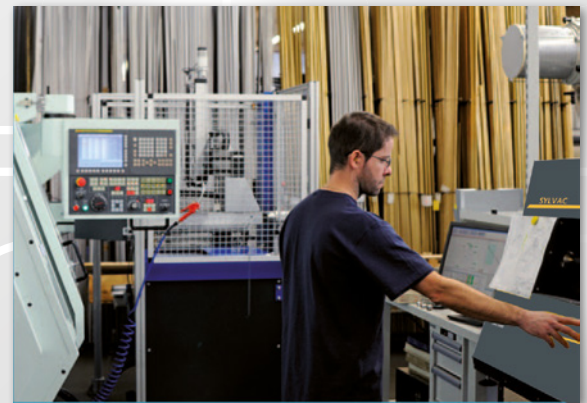
DATA EXPORT AND SPC

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 SOFTWARES KEY FEATURES:

○ Graphics with limits

○ Histograms

○ Statistic parameters

○ Control charts

○ Protocols

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 use**
- Reflex click technology
- **Data export**
- SPC basic

ONE CLICK
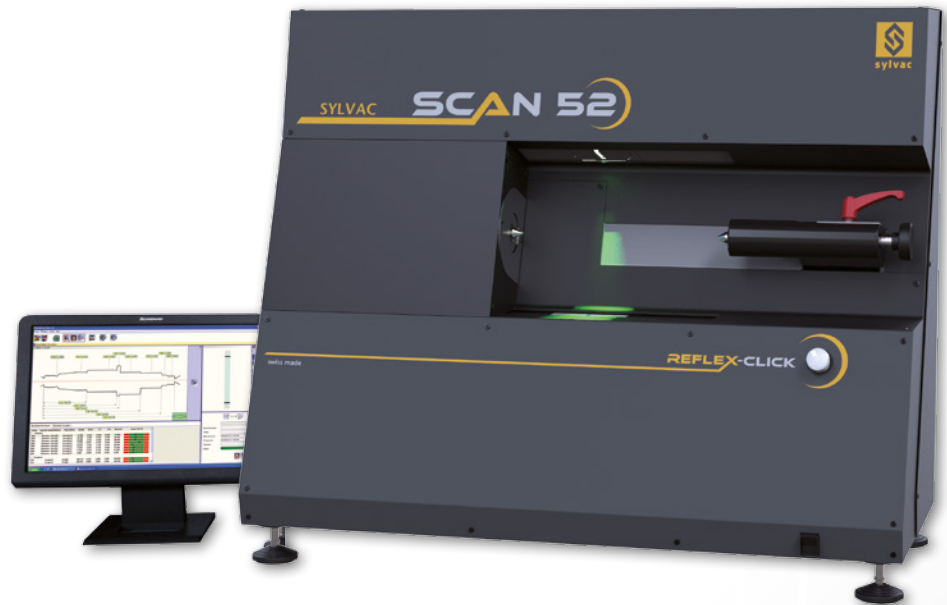
TECHNICAL SPECIFICATIONS

|		902.5520 – SCAN52		902.5521 – SCAN52 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	µm	Diameter : 0.6 / Length : 2.5			
Rotary headstock		–		✔	
Max. part weight	kg	4			
Weight	kg	103			
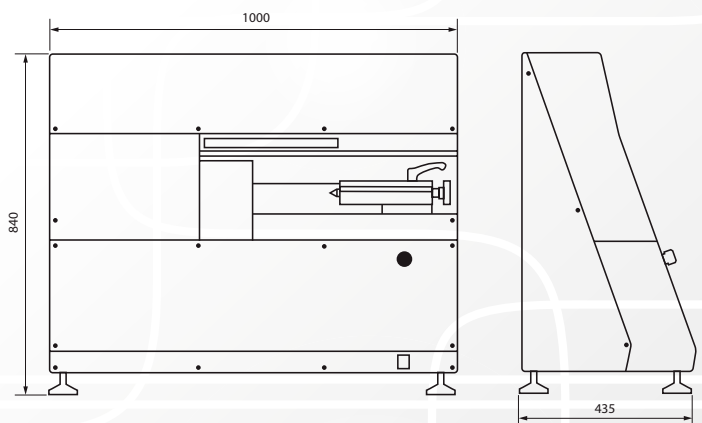
DELIVERY

- Instrument according to technical specifications
- 2 male centers
- Computer with Windows multilingual operating system, mouse, keyboard and screen
- Manual
- Sylvac Reflex-Scan Software
- Rotary headstock (on model 902.5521)

NEW !

Sylvac Scan F60 & F60T

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[+].

THREAD MEASUREMENT
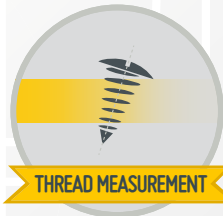
Exclusive helix tilting system by Sylvac, for more comprehensive thread measurements.

L VERSION

STANDARD VERSION

- 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	0.2 ÷ 64	300	0.2 ÷ 64	300	0.2 ÷ 64	500	0.2 ÷ 64	500
Resolution	mm	0.0001							
Accuracy	µm	Diameter : (1 + D/100) / Length : (3 + L/100)							
Repeatability	µm	Diameter : 0.5 / Length : 2.0							
Tilting for thread meas.		–		✔ (30°)		–		✔ (30°)	
Max. part weight	kg	10							
Weight	kg	235				261			
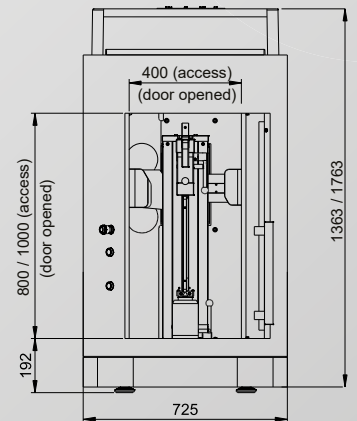
400 (access)
(door opened)

800 / 1000 (access)
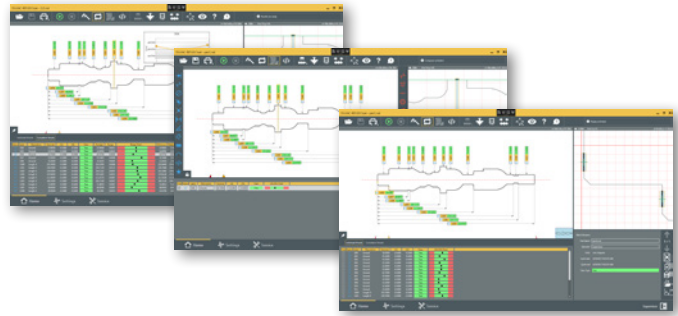(door opened)

1363 / 1763

192

725

DELIVERY

- Instrument according to technical specifications
- 2 male centers
- Computer with Windows multilingual operating system, mouse, keyboard and screen
- Manual
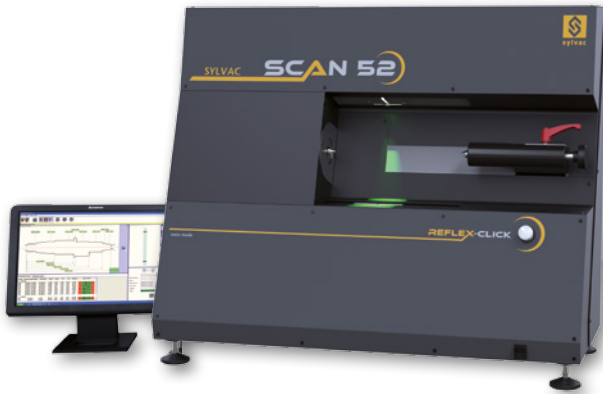- Sylvac Reflex-Scan[+] Software

ONE CLICK

IMPROVED ACCURACY

SUPER FAST

REFLEX-SCAN[+]

⬡ SPECIFICATIONS

SYLVAC–REFLEX SCAN

SYLVAC–REFLEX SCAN⁺

⬡ CAPABILITIES

	SYLVAC-REFLEX Scan	SYLVAC-REFLEX Scan⁺
Automatic measurement of the main features (diameters, lenghts, angles, radii)	✔	✔
Automatic parts / program recognition	✔	✔
Off-line programming		✔
Advanced Dust filtering		✔
Statistics view		✔
CAD import		✔
Reports editor	✔	✔
Data export	✔	✔
SPC basic calculations	✔	✔
SPC software	On request	On request
Access management – security level	1	Multiple
Script function		Option

⬡ GEOMETRICAL TOLERANCING – FEATURES SUMMARY

	SYLVAC-REFLEX Scan	SYLVAC-REFLEX Scan⁺
Diameters	✔	✔
Lenghts, heights, distances	✔	✔
Angles, chamfers	✔	✔
Radii	✔	✔
Threads (parallel)	✔	✔
Advanced threads measurement (root detail, taper, multi-starts, ball screws, worm screws, specialthreads)		✔
Perpendicularity		✔
Form deviation		✔
2 and 3D alignment of the parts (axis correction)	✔	✔
Rotational diameters	✔	✔ Advanced
Run out	✔	✔ Advanced
Concentricity	✔	✔
Roundness	✔	✔
Cylindricity	✔	✔
Across flats	✔	✔
Straightness	✔	✔ Advanced
Interrupted parts (splines, turbines)		✔

INVESTMENT

Contact your local agent for more information or a free calculation of your ROI !

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 :

= 10-30 minutes inspection time

Sylvac SCAN series
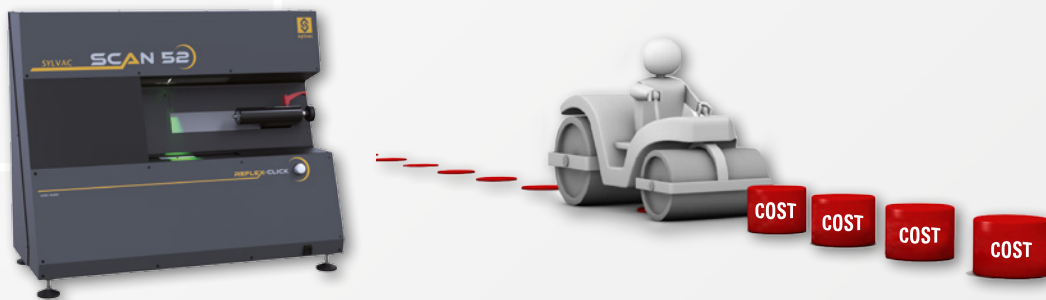
= 30-60 seconds inspection time = cost saving !

TAILOR-MADE SOLUTIONS

Some applications need more than one stand-alone machine. In order to fulfill specific requirements, we can evaluate various turnkey solutions such as:

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.

Clamping solution

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.

Enclosures

Enclosures and machine stands available on request, giving extra protection on the the shop floor.

OPTICAL MACHINE WITH UNIVERSAL 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

AUTOMOTIVE

AEROSPACE

PHARMA

ELECTRO MOTORS
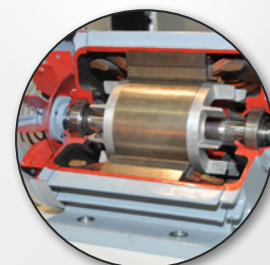
PACKAGING

MEDICAL

WATCH INDUSTRY

PLASTICS
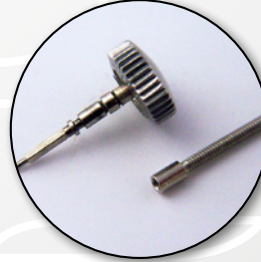
THREADS

CONNECTORS

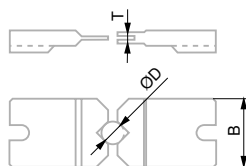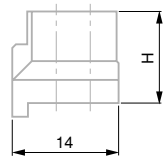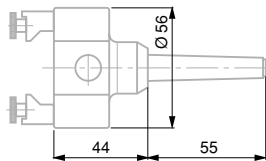**MUNITIONS**

INJECTION MOULDING

COSMETICS

PLUMBING

HYDRAULIC

PNEUMATIC

Accessories

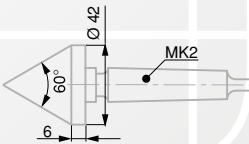| Order Number	Morse 2 SYLVAC-SCAN 52/F60	Notes	Description
902.6220	Morse 1	External clamping for manual use Requires 902.6360	Two-jaw gripper
902.6231 H=22		In pairs	Raising blocks for external jaws
902.6141 0÷6 mm T = 1,5	✔	For 902.6220	External jaws, in pairs
902.6142 0÷6 mm T = 3			
902.6143 6÷12 mm T = 3			
902.6144 12÷18 mm T = 6			
902.6145 18÷24 mm T = 9			
902.6152 0÷6 mm T = 6			
902.6153 0÷6 mm T = 15			
902.6140 6÷12 mm T = 15			
902.6154 Set of jaws including: 902.6141 902.6142 902.6143 902.6144 902.6145	✔	For 902.6220	External jaws, in pairs 902.6141 : Jaws dia 0-6mm, T1=1.5mm 902.6142 : Jaws dia 0-6mm, T1=1.3mm 902.6143 : Jaws dia 6-12mm, T1=3mm 902.6144 : Jaws dia 12-18mm, T1=6mm 902.6145 : Jaws dia 18-24mm, T1=9mm
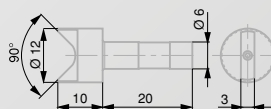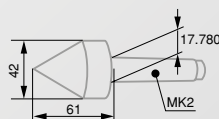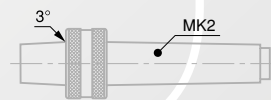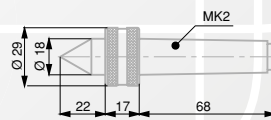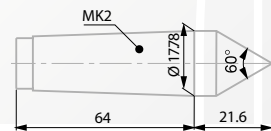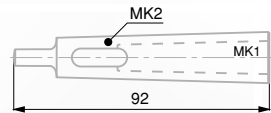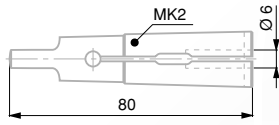
Order Number	Morse 2 SYLVAC-SCAN 52/F60	Notes	Description
902.6251	✔		Center adapter with a 6 mm dia. coupling bore
902.6360	✔		Reduction sleeve, Morse 2 to 1
902.6202	✔	2 items provided with SYLVAC-SCAN F60 and SYLVAC-SCAN 52 Reflex-Click	Extra male center, 17.78 mm
902.6161	✔		Rotation center, Morse 2
902.6162	✔		Rotation center with a B18 male taper plus a Morse 2 shank
902.6380	✔		Rotation center, Morse 2
902.6204	✔	Requires 902.6251	Female center, 10 mm dia.

ACCESSORIES
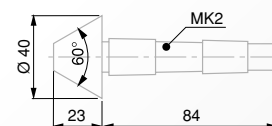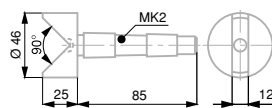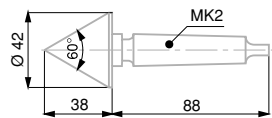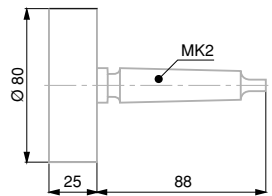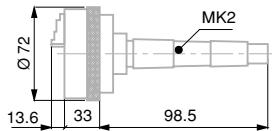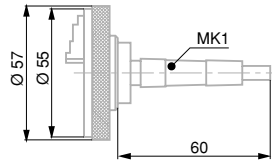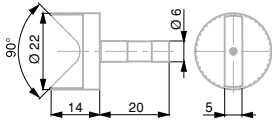
Order Number	Morse 2 SYLVAC-SCAN 52/F60	Notes	Description
902.6205	✔	Requires 902.6251	Female center, 20 mm dia.
902.6300	✔	Clamping capacity : outside 1÷15mm, inside 11÷26mm Requires 902.6360	3-jaw chuck, clamping range 1÷15mm
902.6301	✔	Clamping capacity : outside 2÷50mm, inside 23÷50mm	3-jaw chuck with Morse 2 taper shank, clamping range 2÷50mm
902.6209	✔		Plate, 80mm dia, with a Morse 2 taper shank
902.6210	✔	Diamond coated	Drive centre, Ø40mm. with a Morse 2 taper shank
902.6340	✔		Female centre, 40 mm dia. with a Morse 2 taper shank
902.6341	✔		Male centre, 15÷40 mm dia. with a Morse 2 taper shank
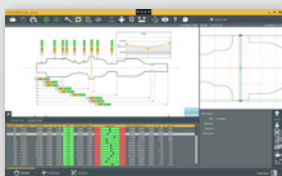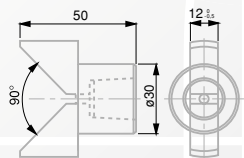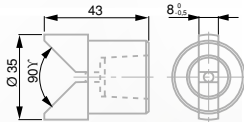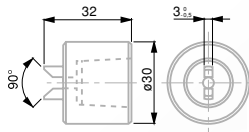
Order Number	Morse 2 SYLVAC-SCAN 52/F60	Notes	Description
902.6310	✔	Requires 902.6162	Female center, 10 mm dia., with a B18 internal taper
902.6311	✔	Requires 902.6162	Female center, 30 mm dia., with a B18 internal taper
902.6312	✔	Requires 902.6162	Female center, 45 mm dia., with a B18 internal taper
902.6410	✔	Diamond coated	Drive centre, 42 mm dia. max.
902.6350	Reflex SCAN Advanced Package Software (additional package)		
902.7015	Reflex SCAN⁺ Offline Software		
902.7016	Reflex SCAN⁺ Script programming Software (additional package)		

* Requires Reflex SCAN software
** Requires Reflex SCAN + software

INSTRUMENT

Part measurement

Reflex-SCAN$^+$ software

One click measurement

Integrated control master

Sylvac Reflex-Scan software

One click measurement