OPTICAL MEASURING MACHINES

SYLVAC SCAN

Dedicated to fast, precise, non-contact measurement of cylindrical parts. Our new SCAN machines reproduce high resolution images of the components profile in just a few seconds. Thanks to the easy to use Reflex-SCAN software, parts can be measured with just a click of a button, offering over 150 different types of measurement features.

SYLVAC VISIO





SYLVAC-SCAN

DESCRIPTION 52 REFLEX-CLICK

- Horizontal SCAN machine, measuring in landscape format, the same as the parts are produced
- Robust construction with granite column for use in workshop or control laboratory
- Concept Reflex SCAN patented for measuring cylindrical workpieces without preprogramming
- Measurements performed in seconds by a single click
- Load the part, click the button and you get all the main values directly!
- Automatic recognition of recorded parts already measured
- Easy daily calibration thanks to the integrated master
- Quick return of investment



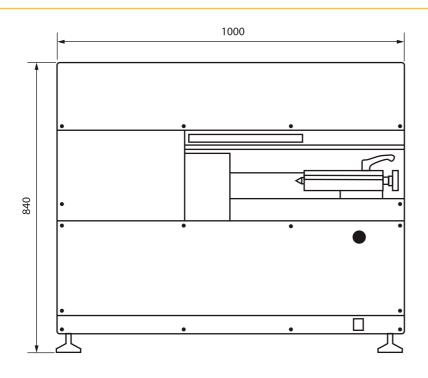


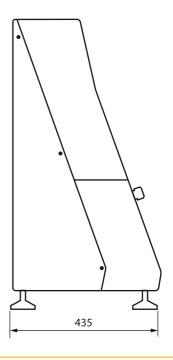


SYLVAC-SCAN

DIMENSIONAL DRAWINGS

52 REFLEX-CLICK





TECHNICAL SPECIFICATIONS

| | | 902.5520 | | 902.5521 | |
|---------------------|----|------------------------|-------------------------|-----------------------------|--------------------------|
| | | Diameter | Length | Diameter | Length |
| Measuring range | mm | 0.5 ÷ 52 | 300 | 0.5 ÷ 52 | 300 |
| Resolution up to | mm | 0.0001 | 0.0005 | 0.0001 | 0.0005 |
| Max. error | 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 |
| Headstock | | Non-Rotating headstock | for static measurements | Rotary headstock for static | and dynamic measurements |
| Max. weigth of part | kg | | | 4 | |
| Machine's weight | kg | | 11 | 03 | |

STANDARD 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
- Manual



SYLVAC-SCAN

DESCRIPTION F60 & F60T

- Concept Reflex SCAN patented for measuring cylindrical workpieces without preprogramming
- Part measurement from **0.2 to 64mm diameter and up to 300mm** length
- Complete 2D part scan in <3 seconds!
- Reduce inspection time, scrap and increase productivity
- Exclusive helix tilting system for thread measurements (only on T models)
- Quick return of investment, typically < 6 months
- Software Reflex SCAN + : advanced programming and functions
- Quick release tooling

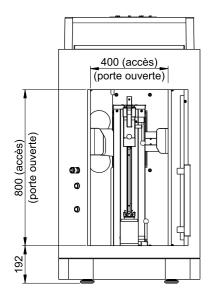


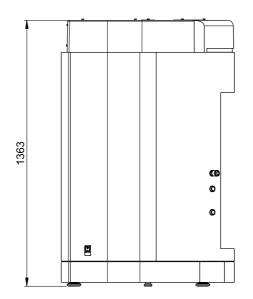


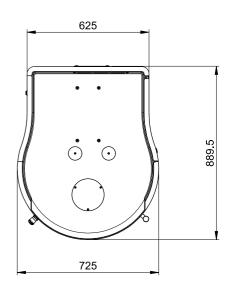
SYLVAC-SCAN

DIMENSIONAL DRAWINGS

F60 & F60T







TECHNICAL SPECIFICATIONS

| | | 902. | 4060 | 902.4065 | | |
|---------------------------|--------|--|---------|--------------------|--------------------|--|
| | | Sylvac S | CAN F60 | Sylvac SCAN F60T | | |
| | | Diameter | Length | Diameter | Length | |
| Measuring range | mm | 64 | 300 | 64 | 300 | |
| Resolution up to | mm | 0.0001 0.0001 | | 0.0001 | 0.0001 | |
| Max. error | μm | (1 + D[mm]/100) μm (3 + L[mm]/200) μm | | (1 + D[mm]/100) μm | (3 + L[mm]/200) μm | |
| Repeatability | μm | 0.5 | 0.5 | | 1.0 | |
| Holding capacity diameter | mm | 120 | 120 315 | | 315 | |
| Headstock | | Rotary headstock for static and dynamic measurements | | | | |
| Tilting for thread measu | rement | | | • 30° | | |
| Max. weigth of part | kg | 10 | | | | |
| Machine's weight | kg | 265 | | | | |

STANDARD 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 +
- Manual



SYLVAC-SCAN

DESCRIPTION F60L & F60LT

- Concept Reflex SCAN patented for measuring cylindrical workpieces without preprogramming
- Part measurement from **0.2 to 64mm diameter and up to 500mm** length
- Complete 2D part scan (500mm) in <5 seconds!
- Reduce inspection time, scrap and increase productivity
- Exclusive helix tilting system for thread measurements (only on T models)
- Quick return of investment, typically < 6 months
- Software Reflex SCAN + : advanced programming and functions
- Quick release tooling

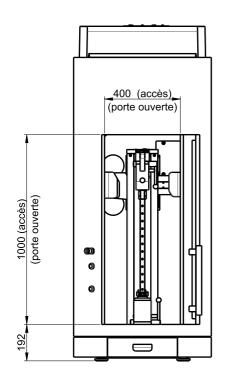
Version L!

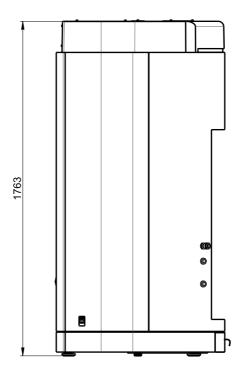


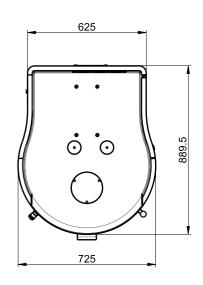
SYLVAC-SCAN

DIMENSIONAL DRAWINGS

F60L & F60LT







TECHNICAL SPECIFICATIONS

| | | 902. | 4062 | 902. | 4067 | | |
|---------------------------|-------|---------------------------------------|--|--------------------|--------------------|--|--|
| | | Sylvac SO | CAN F60L | Sylvac SCAN F60LT | | | |
| | | Diameter | Length | Diameter | Length | | |
| Measuring range | mm | 64 | 500 | 64 | 500 | | |
| Resolution up to | mm | 0.0001 | 0.0001 | 0.0001 | 0.0001 | | |
| Max. error | μm | (1 + D[mm]/100) μm (3 + L[mm]/200) μm | | (1 + D[mm]/100) μm | (3 + L[mm]/200) μm | | |
| Repeatability | μm | 0.5 | | 0.5 | 1.0 | | |
| Holding capacity diameter | mm | 120 | 120 500 | | 500 | | |
| Headstock | | | Rotary headstock for static and dynamic measurements | | | | |
| Tilting for thread measur | ement | | | • ; | 30° | | |
| Max. weigth of part | kg | | 1 | 0 | | | |
| Machine's weight | kg | | 33 | 30 | | | |

STANDARD 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 +
- Manual



SYLVAC-SCAN

DESCRIPTION S145

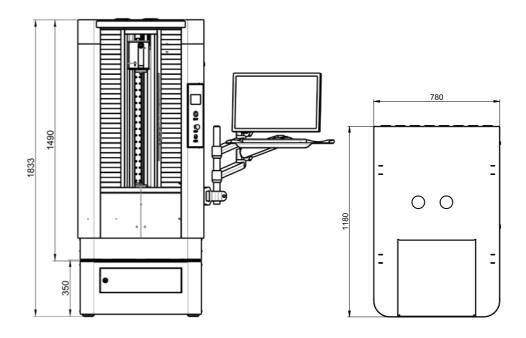
- Concept Reflex SCAN patented for measuring cylindrical workpieces without preprogramming
- Part measurement from 0.2 to 145mm diameter and up to 615mm length
- Complete 2D part scan
- Reduce inspection time, scrap and increase productivity
- Quick return of investment
- Software Reflex SCAN + : advanced programming and functions
- Quick release tooling



SYLVAC-SCAN

DIMENSIONAL DRAWINGS

S145



TECHNICAL SPECIFICATIONS

| | | 902. | 4145 | | |
|---------------------------|------|-----------------------------|--------------------------|--|--|
| | | Sylvac SCAN S145 | | | |
| | | Diameter | Length | | |
| Measuring range | mm | 145 | 615 | | |
| Resolution up to | mm | 0.0001 | 0.0001 | | |
| Max. error | μm | (1.5 + D[mm]/100) μm | (4 + L[mm]/200) μm | | |
| Repeatability | μm | 2 δ =0.5 | 2 ŏ =1.0 | | |
| Holding capacity diameter | mm | 254 | 615 | | |
| Rotation resolution | 0 | 0.0 | 003 | | |
| Axial measuring speed | mm/s | 8 | 30 | | |
| Axial positioning speed | mm/s | Up t | 0 200 | | |
| Rotational meas. speed | °/s | 360 | | | |
| Headstock | | Rotary headstock for static | and dynamic measurements | | |
| Max. weigth of part | kg | 60 | | | |
| Machine's weight | kg | 5. | 30 | | |

STANDARD DELIVERY

- Instrument according to technical specifications
- Adapter for Morse 2 (902.6260)
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN Software +
- Manual

U



SYLVAC-SCAN

DESCRIPTION S145L

- Concept Reflex SCAN patented for measuring cylindrical workpieces without preprogramming
- Part measurement from 0.2 to 145mm diameter and up to 1280mm length
- Complete 2D part scan
- Reduce inspection time, scrap and increase productivity
- Quick return of investment
- Software Reflex SCAN + : advanced programming and functions
- Quick release tooling

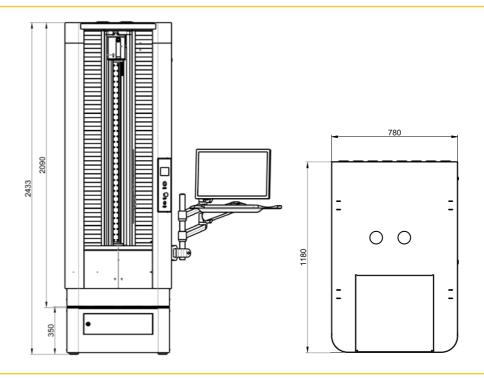




SYLVAC-SCAN

DIMENSIONAL DRAWINGS

S145L



TECHNICAL SPECIFICATIONS

| | | 902. | 4147 | | |
|---------------------------|------|--|--------------------|--|--|
| | | Sylvac SCAN S145 | | | |
| | | Diameter | Length | | |
| Measuring range | mm | 145 | 1280 | | |
| Resolution up to | mm | 0.0001 | 0.0001 | | |
| Max. error | μm | (1.5 + D[mm]/100) μm | (4 + L[mm]/200) μm | | |
| Repeatability | μm | 2 ŏ =0.5 | 2 δ =1.0 | | |
| Holding capacity diameter | mm | 254 | 1280 | | |
| Rotation resolution | 0 | 0.0003 | | | |
| Axial measuring speed m | nm/s | 80 | | | |
| Axial positioning speed m | nm/s | Up | to 200 | | |
| Rotational meas. speed | °/s | 360 | | | |
| Headstock | | Rotary headstock for static and dynamic measurements | | | |
| Max. weigth of part | kg | 60 | | | |
| Machine's weight | kg | 69 | 50 | | |

STANDARD DELIVERY

- Instrument according to technical specifications
- Adapter for Morse 2 (902.6260)
- Computer with screen, keyboard and mouse
- Windows multilingual operating system
- Sylvac Reflex SCAN Software +
- Manual



SYLVAC-SCAN

TECHNICAL SPECIFICATIONS

SOFTWARES

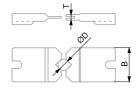
| | FUNCTIONS | | | |
|---|--------------------|---------------------|--|--|
| | SYLVAC REFLEX SCAN | SYLVAC REFLEX SCAN+ | | |
| Automatic measurement of the main features (diameters, lenghts, angles, radius) | • | • | | |
| Automatic parts / program recognition | • | • | | |
| Off-line programming | | • | | |
| Advanced dust filtering | | • | | |
| Statistic view | | • | | |
| CAD import | | • | | |
| Reports editor | • | • | | |
| Data export | • | • | | |
| SPC basic calculations | • | • | | |
| Script function | | option | | |
| SPC software | on request | on request | | |
| Access management - security lever | 1 | multiple | | |

| | 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, | | | | | |
| multistarts, ball screws, worm screws, specialthreads) | | • | | | |
| Perpendicularity | | • | | | |
| Form deviation | | • | | | |
| Rotational diameters | basic | advanced | | | |
| Run out | basic | advanced | | | |
| Concentricity | basic | advanced | | | |
| Roundness | • | • | | | |
| Cylindricity | • | • | | | |
| Across flats | • | • | | | |
| Straightness | | • | | | |
| Interrupted parts (splines, turbines) | | • | | | |

SYLVAC-SCAN

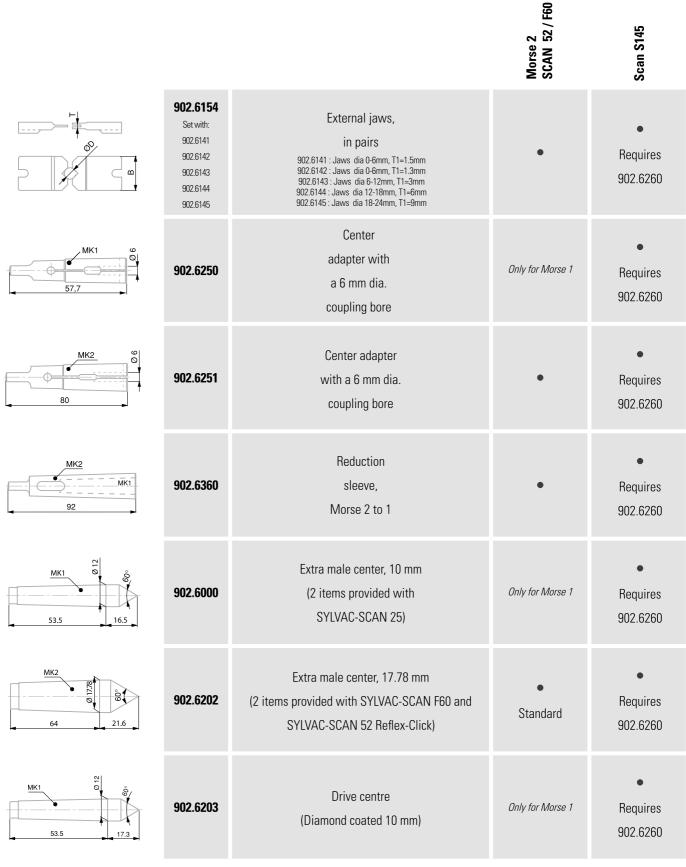
| 44 | 55 |
|----|----------|
| | = |

| | | Mo SC/ | Sca |
|--|---|---|---------------------------|
| 902.6260 | Adapter MK2 for SCAN S145 | | • |
| 902.6220 | Two-jaw gripper External clamping for manual use | • Requires 902.6360 | • Requires 902.6260 |
| 902.6231 H=22 | Raising blocks for external jaws, in pairs | • (<i>Morse 1 requires</i> 902.6220) | • Requires 902.6260 |
| 902.6228 | Magnetic clamping plate Ø0-24 mm | • | • Requires 902.6260 |
| 902.6141 0+6 mm T = 1.5 902.6142 0+6 mm T = 3 | | | |



| 902.6231 H=22 | for external jaws, in pairs | (<i>Morse 1 requires</i> 902.6220) | Requires 902.6260 |
|--|-------------------------------------|---|---------------------------|
| 902.6228 | Magnetic clamping plate Ø0-24 mm | • | • Requires 902.6260 |
| 902.6141 0±6 mm T = 1.5 902.6142 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 | External jaws, in pairs | For 902.6220 (<i>also for Morse 1)</i> | • |
| | | | 0- |

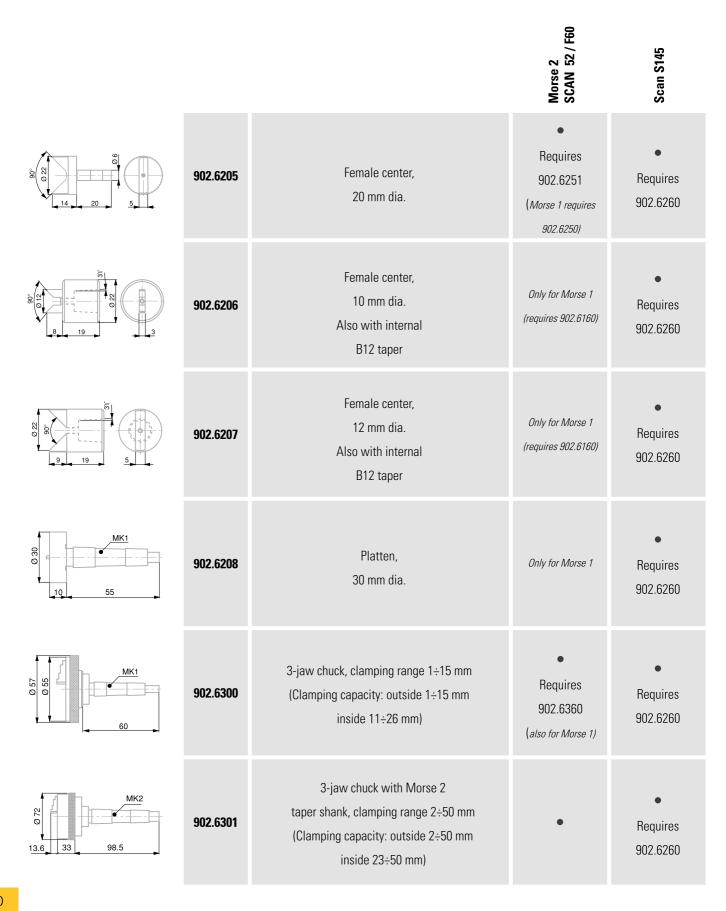
SYLVAC-SCAN



SYLVAC-SCAN

| | | | Morse 2 SCAN 52 / F60 | Scan S145 |
|---|----------|--|---|---------------------------|
| 3° MK1 | 902.6160 | Rotation center with a B12 male taper plus a Morse 1 taper shank (For added sleaves 902.6206/902.6207) | Only for Morse 1 | • Requires 902.6260 |
| MK2 81 81 82 22 17 68 | 902.6161 | Rotation center, Morse 2 (1 item provided with SYLVAC-SCAN F60 and SYLVAC-SCAN 52 Reflex-Click) | • Standard | • Requires 902.6260 |
| 3° MK2 | 902.6162 | Rotation center with a B18 male taper plus a Morse 2 shank | • | • Requires 902.6260 |
| MK1 MK1 N 17 125 57 | 902.6163 | Rotation center, Morse 1 | Only for Morse 1 | • Requires 902.6260 |
| 17.780 MK2 | 902.6380 | Rotation center, Morse 2 | • | • Requires 902.6260 |
| \$\text{0}{\text{10}} \tag{0}{\text{3}} | 902.6204 | Female center, 10 mm dia. | Requires 902.6251 (also for Morse 1, with 902.6250) | • Requires 902.6260 |
| MK2 64 21.6 | 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 |

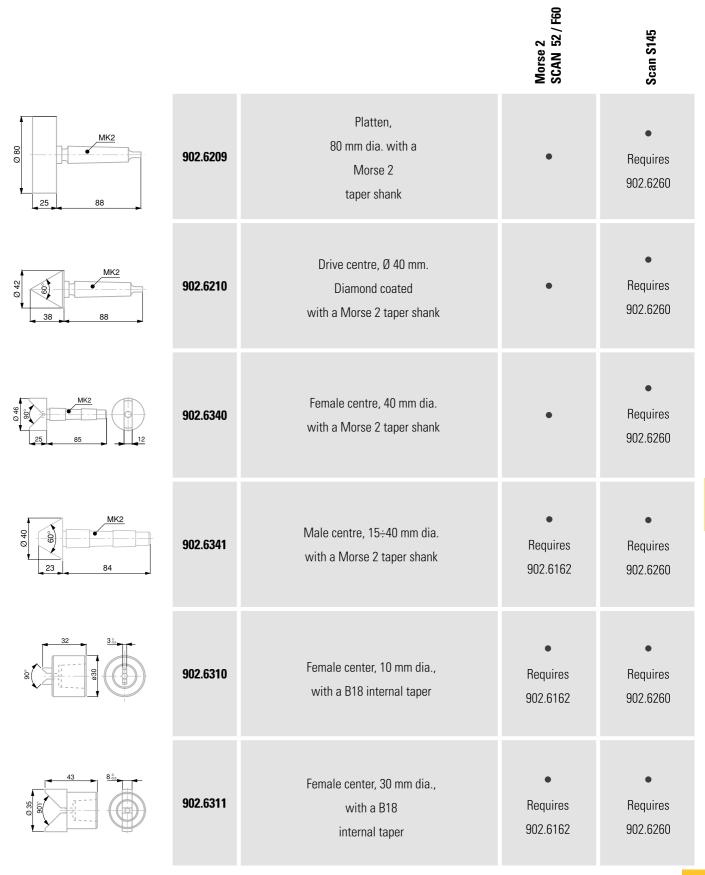
SYLVAC-SCAN



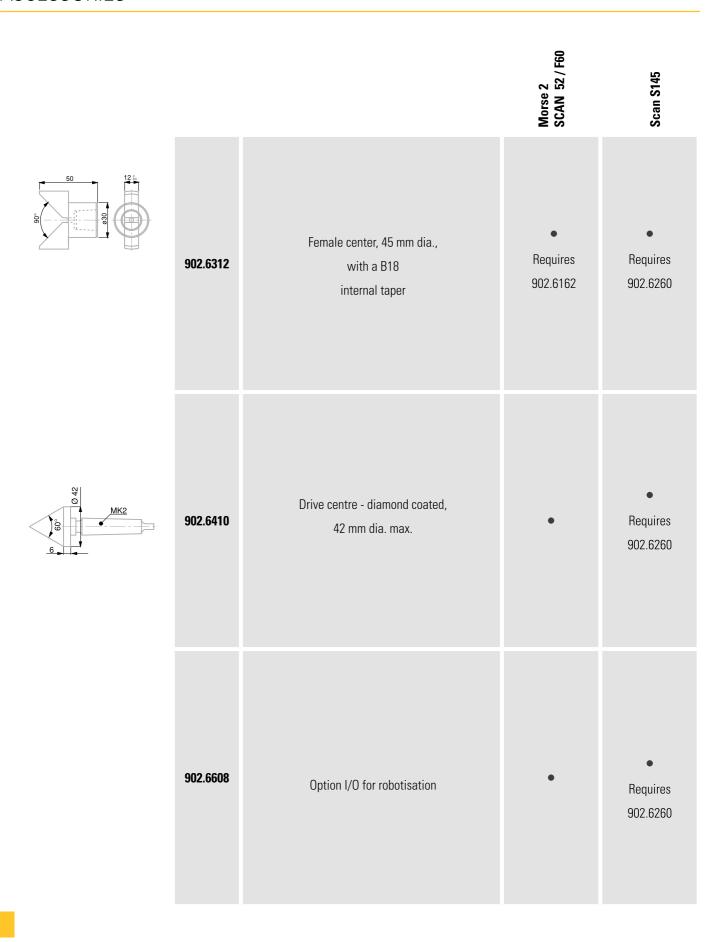
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Optical measurement

SYLVAC-SCAN



SYLVAC-SCAN





SYLVAC-SCAN

8

| | | Morse 2 SCAN 52/F6 | Scan S145 |
|----------|--------------------------------|-----------------------|---------------------------|
| 902.6270 | 2 jaw chuck Ø 0-18mm | • | • Requires 902.6260 |
| 902.6302 | Pneumatic 4 jaw chuck Ø 1-63mm | • | • Requires 902.6260 |



Our Sylvac Scan range can be fully automated with a robot that can load all your workpieces for you directly on the machine for measurement. Available on request.



SYLVAC-SCAN

| | | | SCAN 52 | SCAN F60 | SCAN S145 |
|--|----------|---|---------|----------|-----------|
| | *** | Reflex SCAN Standard (delivered with 902.5520 & 902.5521) | • | | |
| | *** | Reflex SCAN+ Standard (delivered with 902.4060, 902.4062, 902.4065 & 902.4067) | | • | • |
| | 902.7015 | Reflex SCAN+ Offline Software | | • | • |
| | 902.7016 | Reflex SCAN+ Script programming | | • | • |
| | 902.7017 | Reflex-SCAN+ Automation software module (Option, require Reflex SCAN+) | | • | • |
| | 902.7018 | Reflex-SCAN+ CAD compare software (Option, require Reflex SCAN+) | | • | • |
| | 902.7020 | Reflex-SCAN+ Offline CAD compare software (Option, require Reflex SCAN+) | | • | • |
| | 902.7021 | Reflex-Scan+ "PRO" With advanced feature wizards to build custom features and threads | | • | • |



SYLVAC-SCAN

| | | SCAN 52 | SCAN F60 | SCAN S145 |
|----------|--|---------|----------------------------|-----------|
| 902.6012 | Gold demo part | • | • | • |
| 902.6013 | Gold demo part for threads | • | • | • |
| 902.6014 | Gold demo part XL | | | • |
| 902.6600 | Table for Sylvac SCAN F60 (85x85x70cm) | | • | |
| 902.6601 | Furniture for Sylvac SCAN F60 storage for PC, drawer with lock and arm for keyboard and screen | | • Not for L versions | |
| 902.6605 | Height-adjustable table (71-1140mm) for keyboard, screen and mouse (80x60mm) | | • | |
| 902.6607 | Accessories tidy insert for drawer (combined with 902.6601) | | • | |
| 928.6006 | Plastiform case for SCAN and VISIO | • | • | • |
| 902.6609 | Rack | • | • | • |
| | | | | , |



SYLVAC-VISIO

DESCRIPTION 200 & 300 V3

- High quality 2.5D video measuring system with larger field of view up to 30x19mm (standard config 15x9.5mm)
- New software layout with auto toggle screens live/schematic and touch compatible
- Full HD Camera with improved image quality
- Robust construction with stage mounted on granite base and vertical column in granite
- Manual table stage releasable for quick XY movement, fitted with high precision encoders
- High quality bearing guidance for better accuracy
- Optics including CMOS camera and Navitar zoom (manual or motorised)
- Programmable triple lighting: coaxial, ring light programmable by sector and diascopic light
- Multilingual Sylvac-REFLEX Vista software easy to use

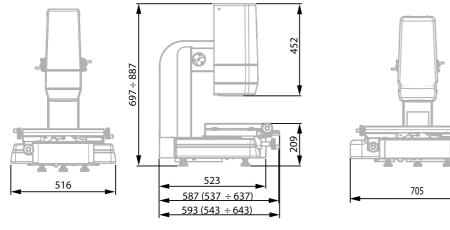


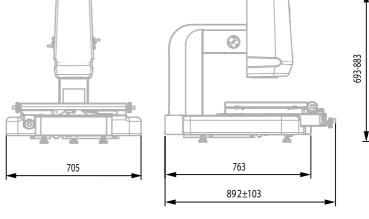


SYLVAC-VISIO

DIMENSIONAL DRAWINGS

200 & 300 V3





Sylvac VISIO 200 V3

Sylvac VISIO 300 V3

TECHNICAL SPECIFICATIONS

| | | 902.2210 | 902.2211 | 902.2310 | | |
|---|----|---|------------------------|-----------------------------------|--|--|
| Model | | Sylvac Visio 200 | | Sylvac Visio 300 | | |
| Measuring volume | mm | 200x100x150 | | 300x200x150 | | |
| X, Y Accuracy (E ₁ , X, Y) | μm | 1.9 + 10L/1000 | $O(L = mm)^{-1}/^{-3}$ | $1.9 + 4L/1000 (L = mm)^{1}/^{3}$ | | |
| XY Accuracy (E ₂ , XY) | μm | 2.4 + 10L/1000 | $O(L = mm)^{-1}/^{-3}$ | $2.4 + 4L/1000 (L = mm)^{1}/3$ | | |
| Z Accuracy (E ₁ , Z) ²⁾ | μm | 2.9 + 10L/1000 (L = mm) | | 2.9 + 5L/1000 (L = mm) | | |
| Resolution | mm | 0.001 | | 0.001 | | |
| Max. load capacity | kg | 1 | 0 | 20 | | |
| Magnification (screen 23.8") | | 24x - 144x (12x - 288x with additional lenses) | | | | |
| Zoom | | Manuel 4x | Motorised 6x | Motorised 6x | | |
| Weight | | 9 | 8 | 170 | | |
| International standards | | EN61000-6-2, EN61000-6-4, EN61326-1, EN12100-1, EN12100-2 | | | | |

 $^{^{1)}}$ m \leq 5 kg

STANDARD DELIVERY

- Instrument according to technical specifications
- Software Sylvac-REFLEX Vista multilingual
- Computer with touchscreen 23.8", keyboard and mouse
- CAD compare software

- Windows 10 multilingual operating system
- Manual
- Calibration certificate

²⁾ mechanical accuracy

³⁾ at glass plate level

SYLVAC-VISIO

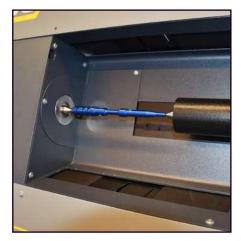
| | | | VISIO 200 | VISI0 300 |
|---------------|----------|--|----------------------|----------------------|
| -* | 902.6020 | Visio demo part | • | • |
| | 902.7370 | Diascopic illumination, parallel light | • | • |
| | 902.7100 | Additional lens, 0,5x for zoom 6,5x | • | • |
| | 902.7101 | Additional lens, 0,75x for zoom 6,5x | • | • |
| | 902.7102 | Additional lens, 1.5x for zoom 6,5x | • | • |
| | 902.7103 | Additional lens, 2x for zoom 6,5x | • | • |
| | 902.7380 | Foot switch for value capture | • | • |
| 0.011 - VID 1 | 902.7390 | Sylvac - Reflex Vista COMPARE | Standard delivery | Standard delivery |
| | 928.6006 | Plastiform case for SCAN and VISIO | • | • |

SYLVAC-VISIO

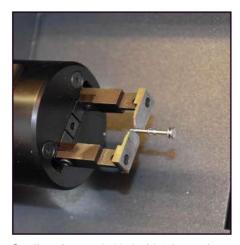
| | | | VISIO 200 | VISIO 300 |
|---------------------|----------|---|-----------|-----------|
| Par MILANDO CONT | 902.7300 | Basic fixtures Kit: 1x Quick-Load Corner Fixture (QLC) 1x 13mm x 150mm x 150mm R&R Acrylic Multi-Hole Fixture Plate 1x (3) Dowel Pins 3x 6mm Dia. x 10 and x 25mm Standoff 3x 9mm Dia. x 5, x 10, x 20 and x 25mm Standoff 3x 12mm Dia. x 10 and x 25mm Standoff 2x 6mm Dia. x 10mm Pin Standoff 2x 6mm Dia. x 10mm Pin Standoff 2x 9mm Dia. x 10mm Pin Standoff 2x 40mm Tension Clamp with Rubber Coated Tip 2x 25mm Wire Clamp with Rubber Coated Tip 2x 50mm Wire Clamp with Rubber Coated Tip 4x Aluminium Resting Pin with M4 Thread 1x 50mm x 50mm Corner Viewer for M4 1x 9mm Dia. Adjustable Jackstand with M4 Thread 1x M4 Pusher Clamp 1x 30mm and 1x 45mm Long Adjustable Slide with M4 Thread 1x M4 Tower Block 1x Micro-Clamp Vise with Base for M4 Components 1x 12mm Dia. x10mm Spring Pusher Standoff Clamp 1x 300mm x 190mm x 25mm Component Tray to Hold M4 Components | • | • |
| Case Section Course | 902.7301 | Advanced fixtures Kit: All Basic fixtures (acrylic plate 13x200x200mm) kit added with: 3x 6mm Dia. x 5, x 10 and x 25mm Standoff 3x 9mm Dia. x 10, x 20, x 25mm Standoff 3x 12mm Dia. x 10, x25mm Standoff 2x 6mm Dia. x 10mm Pin Standoff 2x 9mm Dia. x 10mm Pin Standoff 4x 12mm Dia. x 10mm Pin Standoff 2x 40mm Tension Clamp with Rubber Coated Tip 2x 25mm Wire Clamp with Rubber Coated Tip 2x 50mm Wire Clamp with Rubber Coated Tip with 50mm Post 1x 9mm Dia. Adjustable Jackstand with M4 Thread 1x 30mm and 1x 45mm Long Adjustable Slide with M4 Thread | • | • |
| | 902.7104 | Fresnel kit 0.5x Fresnel lens + lens 0.5x + fixation screws (for Ringlight) | • | |
| | 902.7105 | Fresnel kit 0.75x Fresnel lens + lens 0.75x + fixation screws (for Ringlight) | • | |
| | 902.7106 | Fresnel kit 1.5x Fresnel lens + lens 1.5x + fixation screws (for Ringlight) | • | |



APPLICATIONS



Measurement of a turned part with SCAN 52



Small turning part holded with 2-jaws gripper accessory on SCAN 52



Thread measurement with SCAN F60T



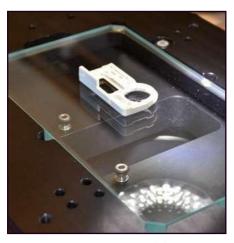
Part measurement with SCAN F60



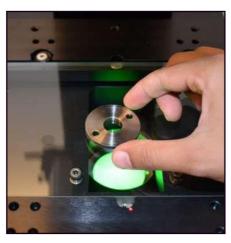
Part measurement with SCAN F60L



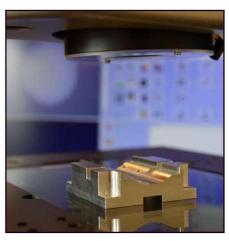
SCAN 52 and robot : closed loop with automatic correction of the part



Part lighted by ring light on VISIO



Part lighted by diascopic light on VISIO



Part lighted by coaxial light on VISIO