sylvac

Smart metrology for optimized productivity

NEW !

SWISS MADE



SYLVAC SCAN

S65T

Automation Ready

TILTING SYSTEM

Mid-size optical machine incorporating the latest optical and imaging technology

Meet the new S65 and S65T – high-performance machines for dynamic measurement of cylindrical parts up to Ø65 mm. Precision made simple.

SCAN S65T

Super fast

Precise measurement of cylindrical parts in only a few seconds.

Easy to use

With one click measurement.

Save money

Quick ROI, reduced inspection time and increased productivity.

Sylvac SA - Avenue des Sciences 19, 1400 Yverdon-les-Bains (CH)
Tel. +41 21 637 67 57 - Email. info@sylvac.ch - Web. www.sylvac.ch

SUMMARY

Next-Generation Vertical Optical Measuring Machine
Engineered for high-precision static and dynamic measurement of cylindrical parts up to Ø65 mm, this advanced system combines speed, accuracy, and ease of use.
Parts can be mounted between centers or secured with a range of accessories. The latest optical and imaging technologies ensure rapid, reliable results, controlled via an intuitive 8" touchscreen—perfect for shopfloor operation.

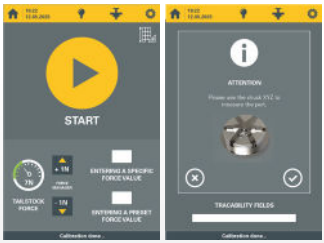
Key features include:

- Dynamic LED lighting for clear measurement feedback
- Integrated calibration master with temperature sensors
- Retractable roof for easy top loading of heavy components
- Optional tilt axis for precise thread measurements (e.g., trapezoidal, ball screws, bone screws)
- Reflex SCAN+ for instant measurement—no programming needed

Delivered with PC and software, fully Automation Ready.
Precision. Speed. Simplicity.



Main user interface



8" easy to use touch screen operator interface.



Exclusive helix tilting system by Sylvac, for more comprehensive thread measurements (S65T model).

DATA

		SCAN S65		SCAN S65T	
		Diameter	Length	Diameter	Length
Measuring range	mm	65	350	65	350
Resolution	mm	Diameter : 0.0001 / Length : 0.0001			
Accuracy	µm	Diameter : (1 + D[mm]/100) / Length : (3 + L[mm]/200)			
Repeatability 2**δ**	µm	Diameter : 0.5 / Length : <1			
Holding capacity	mm	200	360	200	360
Tilt axis	°	-		30	
Headstock		Rotary headstock for dynamic measurements			
Axial move speed	mm	Up to 160mm/s			
Max. part weight	kg	60			
Machine weight	kg	420			

*Measure smarter with the **new S65 and S65T series.***

sylvac

SWISS MADE

EN

SCAN



QUICKSTART

SYLVAC-SCAN

SCAN S65

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DESCRIPTION

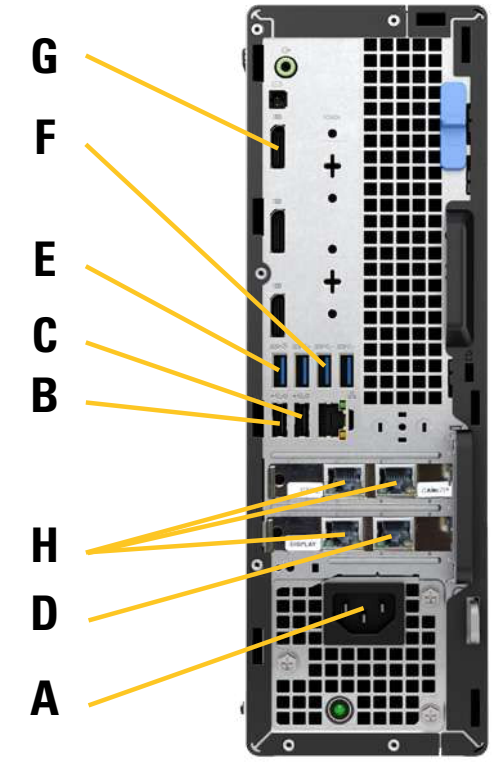
Measuring solution for cylindrical parts up to 350mm in length and 65mm in diameter, using an LED illuminator to project a collimated beam of light onto the part, allowing the collection and processing of the part's contour data through bi-telecentric lens.

1. ELECTRICAL CONNECTIONS

The machine has to be unplugged to proceed to electrical connections.
The cabling below indicates a typical environment and can vary depending on the computer used. The physical position of every connection depends on the characteristics of the chosen computer.

Check the voltage of the computer and the monitor before plugging them into the main!

Do not attempt to alter the main supply voltage of the computer/controller. Contact your SYLVAC agent if the voltage indicated does not match your main supply.





A. Main power supply
B. Keyboard
C. Mouse
D. Automation Ethernet Plug (OPC/UA or Profinet)
E. Touch screen (if supplied)
F. Dongle
G. Screen (Display port)
H. CTRL, CAM
I. I/O connect
J. Security co
K. Pneumatic
L. Footpedal input

The « MICROSOFT SOFTWARE LICENSE TERMS AND CONDITIONS » are available on the desktop of the PC. If you are using this PC, it means that you have read and accepted this document.

2. SAFETY ADVICE

Sylvac machines have been developed with state of the art technology. However, it is important to understand and comply with a few safety rules.



Read this manual carefully before operating the machine.

Use the machine only as described in this manual



Unqualified or inexperienced people are not authorised to use the machine.



Do not operate the machine without the lateral covers.



Sylvac SA accepts no liability for any unauthorised modifications.



Emergency stop button: Do not block access to the emergency stop button.



Sylvac SA accepts no liability if the user does not comply with the instructions written on the machine and contained in the user manual.

3. OVERVIEW AND CONFIGURATION



A - Motorised tailstock: supports the upper part of the measured part. The motorised tailstock can be moved automatically or manually along the vertical axis according to the size of the piece to measure.

B - Part to be measured : allows the user to place the piece to be measured between the centers.

C - Headstock: supports and rotates the bottom of the measured part.

D - ON/OFF switch : machine main start/stop switch (low voltage)

E - Emergency stop button : Press to stop the machine in the event of a dangerous situation. Pull it out once the danger has been removed.

F - Reflex click button (on touchpad)

G - Touchpad with Reflex Scan+ App

4. QUICKSTART OF THE SYLVAC-REFLEX SCAN + SOFTWARE

4.1. Software

1 - Turn on the machine using the ON/OFF button

2 - Start up the computer

3 - Launch the Sylvac-Reflex Scan+ software by clicking on the icon 

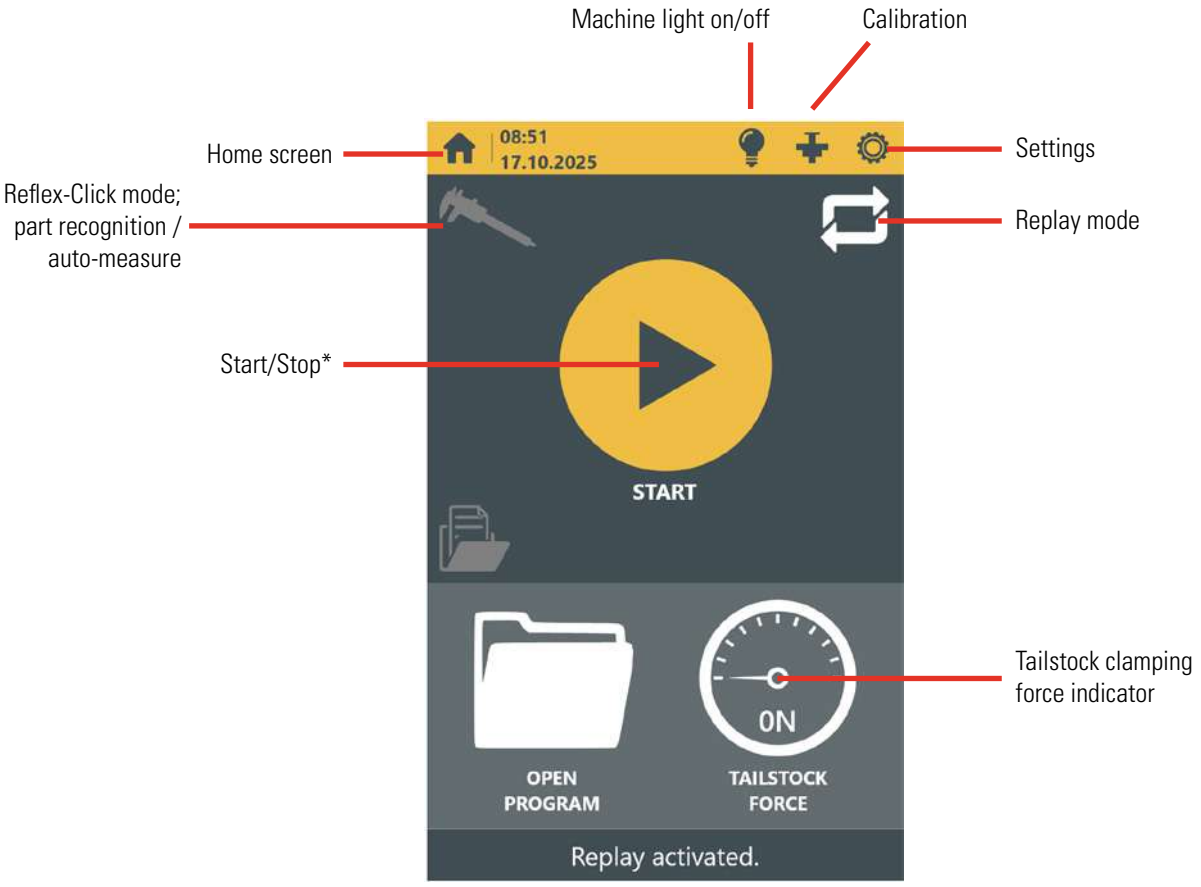
4 - The window (see picture on the right) will be displayed on your screen. Log in as a supervisor using the password "123".

5 - Please refer to Reflex SCAN+'s manual for all features and details.

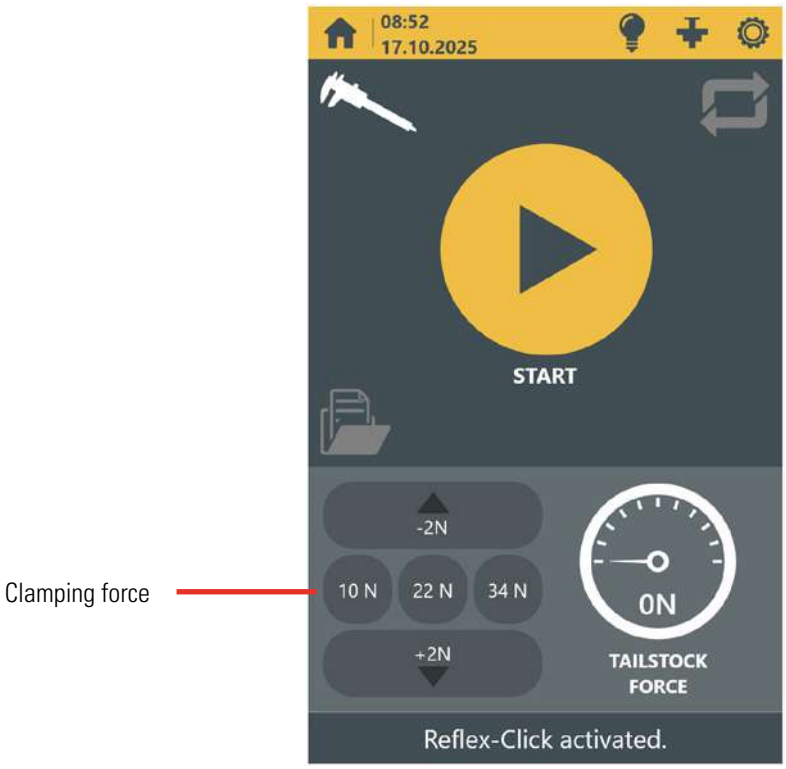


4.2. Touch panel

4.2.1 Main screen



4.2.4 Tailstock control



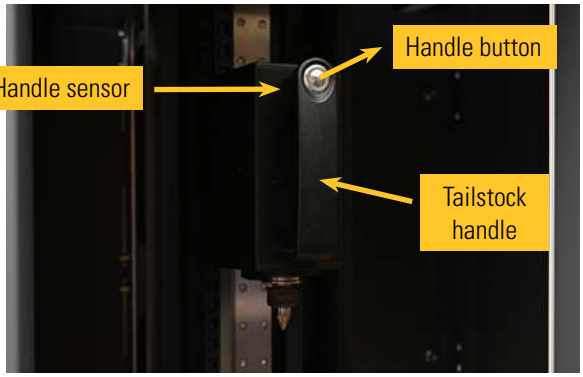
4.3. Calibration of the tailstock



Before starting with calibration, please ensure that batteries with the following specifications are mounted on the main electronic board:

3 x NiMH Rechargeable Battery AAA 1.2V 900mAh

4.3.1 Tailstock calibration



On S65T, The tailstock is motorized and fully automatable. A calibration upon the first use is then required and mandatory. The calibration will focus on two key aspects: position and handle.

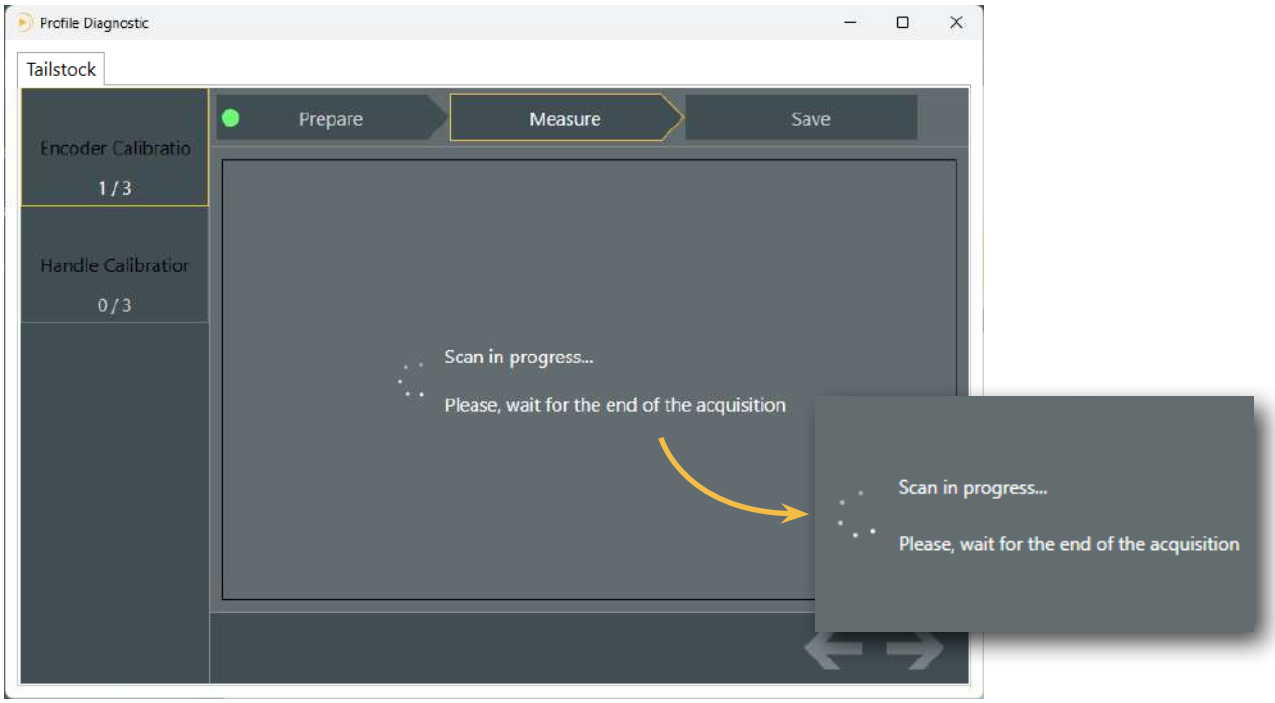
4.3.2. Tailstock position and End Scan configuration (Absolute Encoder)

The tailstock has an electronic absolute encoder. As long as the machine is switched on, the encoder keeps the absolute position. If the machine is switched off, the batteries on the main electronic board will supply it. If by any chance the position of the tailstock is lost, this step is designed to recalibrate it.

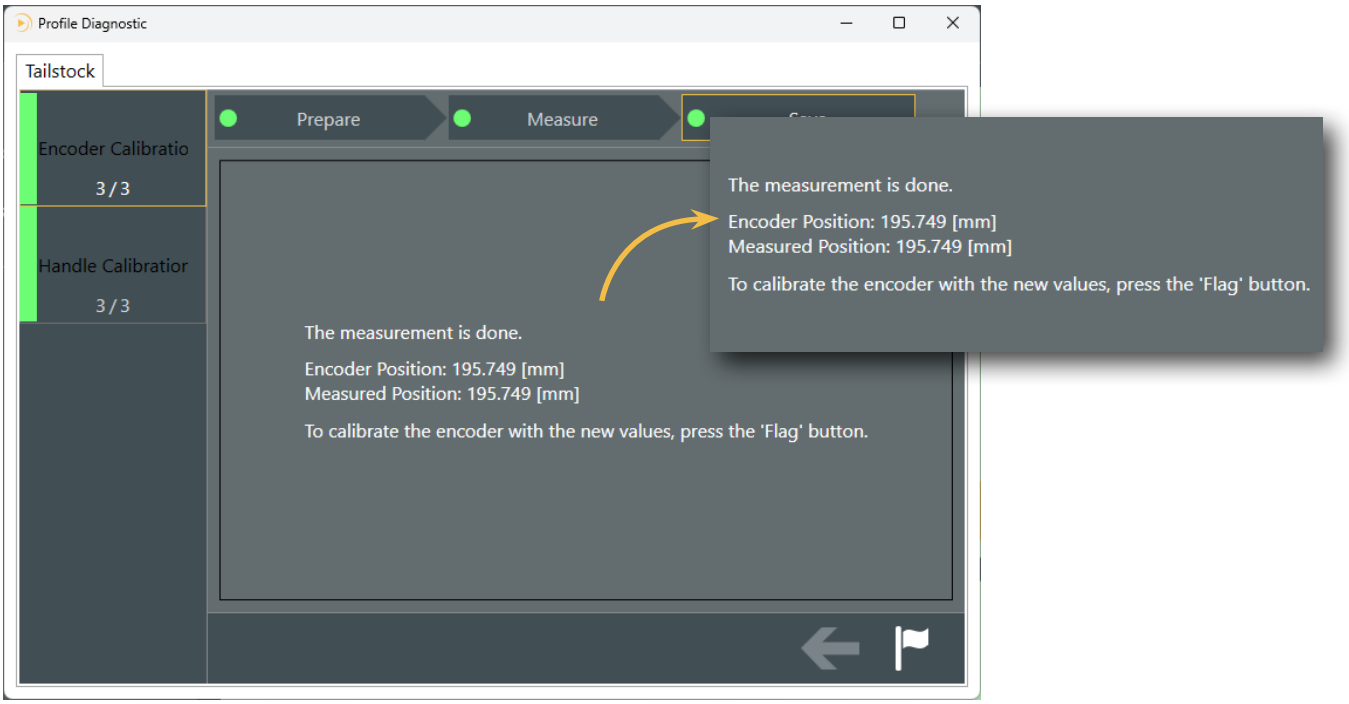
CALIBRATION:
- Make sure the tailstock is on the middle of the stroke and not in the upper or lower limit.



- Choose the upper tab Encoder Calibration . Click on the next arrow to let the optics scan the tailstock (Measure tab).



Once on the Save tab, the values are then updated. Click on the flag button to save.

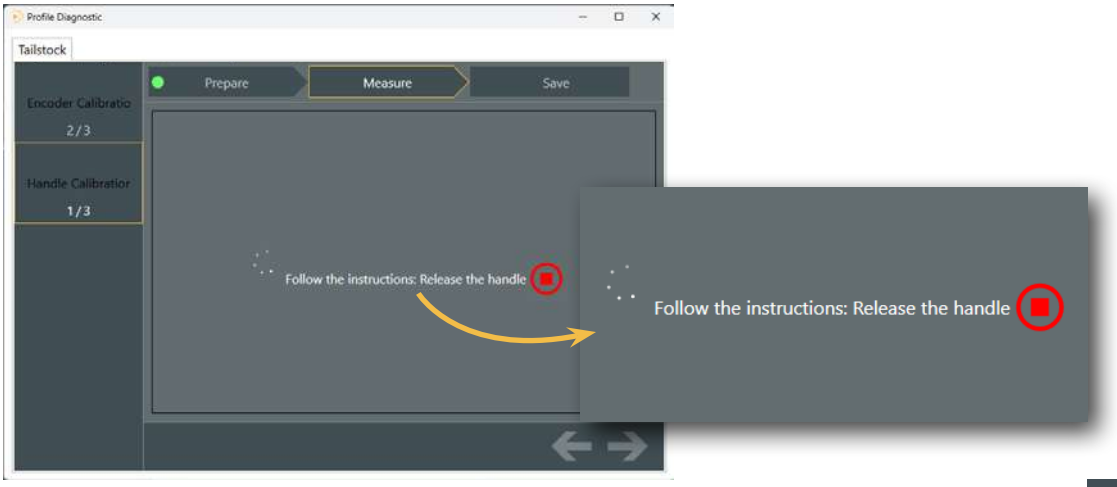


4.3.3. Manual mode assistance (handle calibration)

The tailstock must provide a clamping force between 1.2 kg and 3.4 kg. It integrates a handle sensor that detects the operator's motion direction and allows the motor to actively assist during manual operation. Proper sensor calibration is required to ensure smooth and precise movement.

CALIBRATION:
- Choose the second tab Handle Calibration. Read carefully the notice under Prepare tab. The aim is to push upwards or downward the handle as you want to move it with a standard force that most operators will use. Do not press on the handle button as we do not want to move the tailstock.

- On Measure tab, follow on the screen and the following steps:
idle mode, pushing up, idle, pushing down, idle.



5. MAINTENANCE AND SERVICING

The maintenance and servicing of the machines must be performed by people trained and qualified by Sylvac SA or its official agents.

During servicing or maintenance, switch off the machine completely using the main ON/OFF switch (D).

5.1. Cleaning the Daily Cal

The Daily Cal is the thermal compensation unit of the machine. It allows daily calibration of the machine in order to reset it to the original specifications.

The frequency of daily calibration largely depends on the surrounding conditions (dirt, oil, temperature, etc.).

To achieve the best measuring results, the Daily Cal must be cleaned regularly. A surface inspection program for the Daily Cal is included in the ReflexSCAN software*.

We recommend cleaning the Daily Cal with propan-2-ol (C3H80) using a soft cloth, once a week in an oily environment or once a month in clean surroundings.

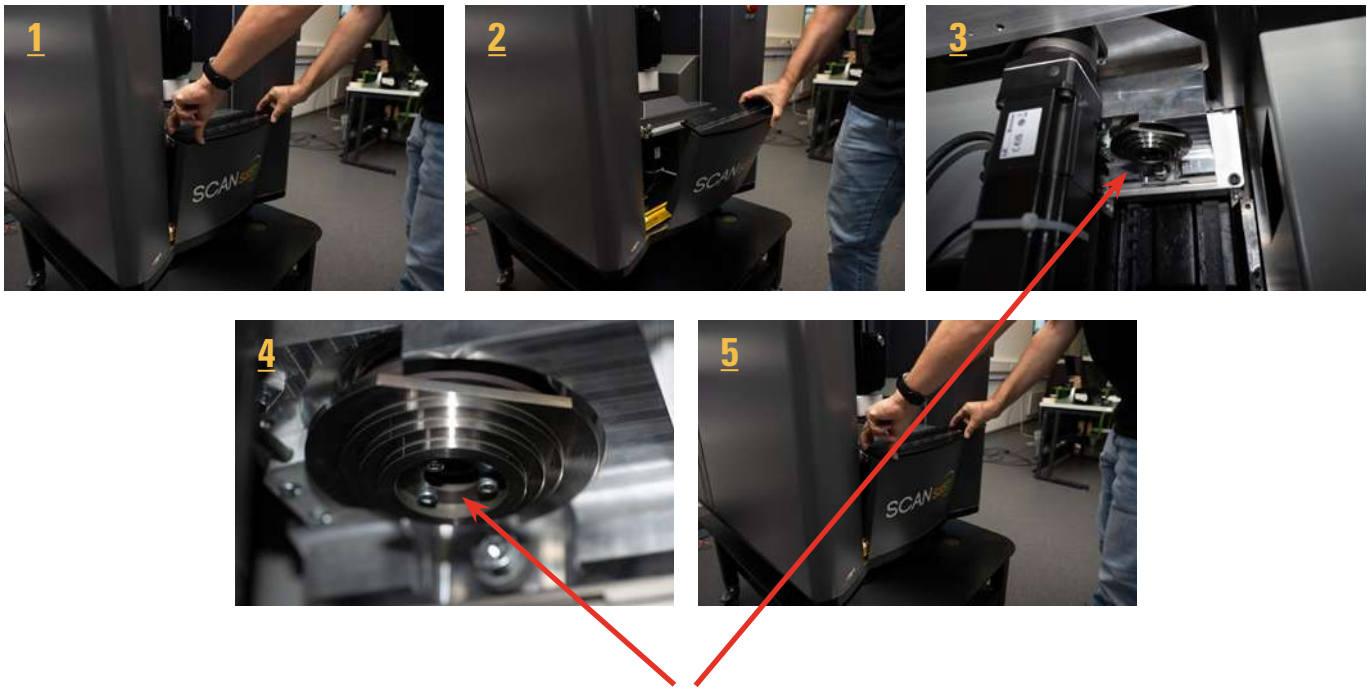
*Available soon

How to clean the Daily Cal :

1. Remove the cover (Images 1-2)

2. Clean the 3 diameters of the Daily Cal with a soft cloth and Isopropyl alcohol (images 3 and 4)

3. Replace the protective cover (image 5)



5.2. Replacing the filters

The machine is equipped with two fans that create a stream of air, allowing heat to be exchanged with the outside. To ensure optimal airflow, the air filters must be in good condition and be replaced when necessary.

How often they are replaced very much depends on the surroundings. If the surroundings are particularly oily, humid or dusty, the filter will not last long.

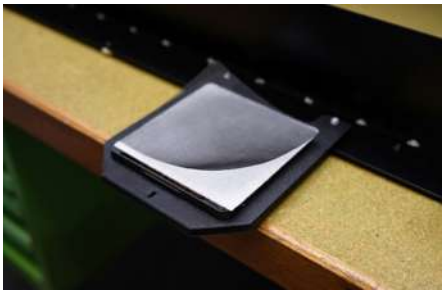
We recommend visual inspect of the filter every month to determine if it needs to be replaced. We recommended replacing the filter at least once a year or earlier depending on its condition.

You can order the air filter from your distributor under the number H057843.

How to access the fan air filters:







5.3. Removing the tips from the tool holder

a. How to avoid injuries

Removal of the tool holder has been designed to make it as easy as possible for the user. However, if the user has not been taught how to remove it, personal injuries and damage to the machine may occur.

To remove the tool holder, press the black circle on the tailstock and slightly remove the tool by pulling downwards (always use your two hands) :




YES



NO

When you put the tool back in place, be sure to push it in firmly :



NO



YES

NOTE: This is not to be confused with quick release of the component to be measured using the supporting spring of the tailstock.

b. Cleaning of the cone inside the tool holder for maximum adhesion when measuring during rotation

For maximum adhesion of the tip in the tool holder, it is strongly recommended to clean the inside of the tool holder using alcohol or acetone to remove any grease. This is necessary to achieve the expected measuring results when the pa






6. TECHNICAL DATA

6.1. Machine S65

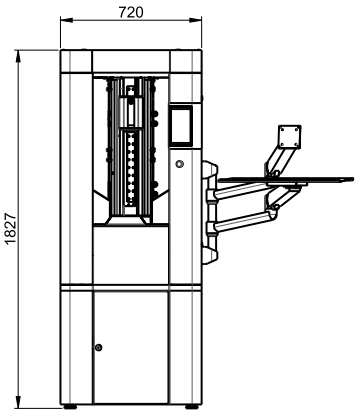
SPECIFICATIONS	DIAMETER	LENGTH
Measuring range	65 mm	350 mm
Resolution	0.0001 mm	0.0001 mm
Accuracy	(1 + D/100) µm	(3 + L/200) µm
Repeatability 2δ	0.5 µm	1.2 µm
Holding capacity	210 mm	360 mm
Rotation resolution	0,003 °	
Axial measuring speed	Up to 160 mm/s	
Axial positioning speed	Up to 200 mm/s	
Rotational meas. speed	720 °/s	
Max. part weight	30 kg	
Machine weight	425 kg	
Machine dimensions (Height/Width/Depth)	1827 × 720 × 955 mm	
Tilting for Thread Measurement	30 °	
Storage temperature	5 to 45 °C	
Relative humidity (storage)	80% max.	
Operating temperature	10 to 40 °C	
Relative humidity (operating / non condensing)	80% max.	
Power supply	48 VDC, 8.3A (exeternal powering provided with the machine: 100-240VAC/48VDC)	
Power consumption while scanning	200W	
Noise level	LpA <70 dB (A)	

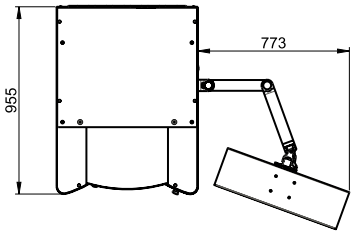
Machine in conformity with the provisions of
Directives 2006/42/CE ; 2014/30/EU and 2014/35/EU
Standards EN 12100:2010 ; EN 60204-1 and EN 61326-1

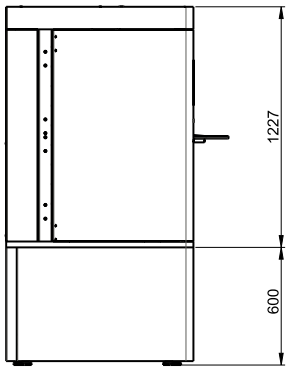
The SCAN S65T includes a tilting axis for thread measurement (30°).

All indicated values are based on the results obtained from clean and ground components measured at 20°C. They may be altered by the component shape and surface finish.

6.2. Drawings of the machine S65 (in mm)

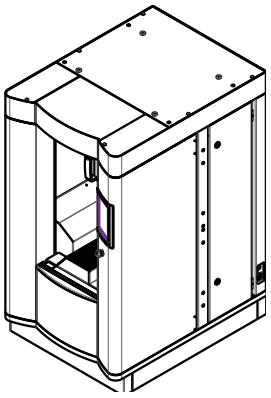


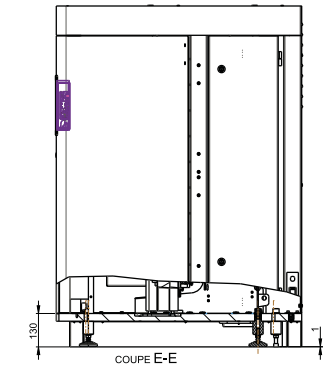


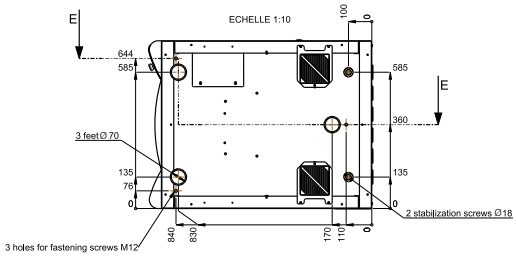


6.3. Attaching the machine on the workbench

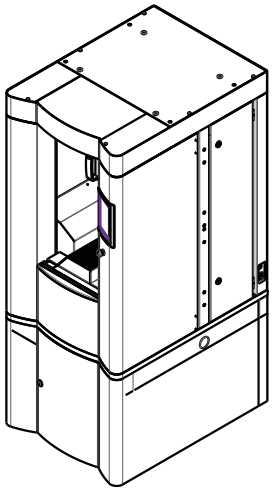
If needed e.g. in case of loading the machine with a robot, it is possible to attach the machine on a workbench.

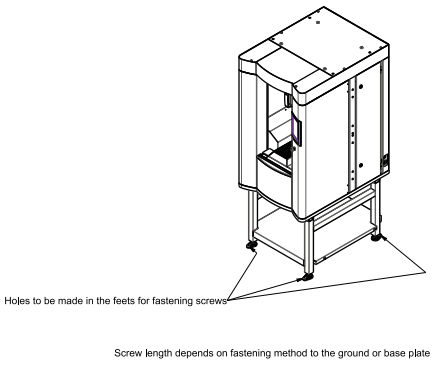


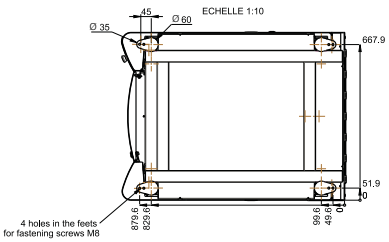




Floor fixation for machine without stand







Floor fixation for machine with long stand

7. CERTIFICATES OF CONFORMITY AND CALIBRATION

7.1. Certificate of conformity

CERTIFICATE OF CONFORMITY
Sylvac certifies that this instrument has been manufactured in accordance with our Quality Standard and tested with reference to masters of certified traceability by the Swiss Federal Office of Metrology.

CERTIFICAT DE CONFORMITE
Sylvac certifie que cet instrument a été fabriqué et contrôlé selon ses normes de Qualité et en référence avec des étalons dont la traçabilité est reconnue par l'office fédéral suisse de métrologie.

QUALITÄTSZEUGNIS
Sylvac bestätigt, dass dieses Gerät gemäss seinen internen Qualitätsnormen hergestellt wurde und mittels Normalen mit anerkannter Rückverfolgbarkeit, kalibriert durch das Schweizerische Bundesamt für Metrologie, geprüft worden ist.

CERTIFICATO DI CONFORMITÀ
Con il presente Sylvac certifica che questo strumento è stato prodotto secondo il nostro standard sulla qualità e controllato rispetto a campioni di riferibilità riconosciuta dall'ufficio federale svizzero di metrologia.

CERTIFICADO DE CONFORMIDAD
Sylvac certifica que este instrumento ha sido fabricado conforme a nuestras normas de calidad y ha sido controlado en relación con patrónes de trazabilidad reconocida por la oficina federal suiza de metrología.

7.2 Certificate of calibration

Calibration certificate
Because we make our Sylvac instruments in batches, you may find that the date on your calibration certificate is not current. Please be assured that your instruments are certified at point of production and then held in stock in our warehouse in accordance with our Quality Management System ISO 9001. Re-calibration cycle should start from delivery date.

Certificat d'étalonnage
En raison de la fabrication de nos instruments par lots de production, il est possible que la date de votre certificat d'étalonnage ne soit pas actuelle. Nous garantissons que nos instruments sont certifiés au moment de leur fabrication puis stockés conformément à notre système de gestion de la qualité ISO 9001. Le cycle de réétalonnage peut commencer à partir de la date de réception.

Zertificat
Da wir unsere Instrumente in Serien herstellen, kann es sein, dass das Datum auf dem Zertifikat nicht aktuell ist. Die Instrumente sind jedoch ab der Herstellung zertifiziert und werden dann gemäß unserem Qualitätsmanagementsystem ISO 9001 in unserem Lager aufbewahrt. Der Nachkalibrierungszyklus kann ab dem Empfangsdatum beginnen..

Certificado de calibración
Considerata la nostra produzione in serie di strumenti, è possibile verificare che la data di produzione sul rapporto di prova / certificato di taratura non è attuale. Accertarsi che gli strumenti siano correttamente certificati dalla nostra produzione e che sono conservati in stock presso il nostro magazzino secondo il sistema di gestione della qualità ISO 9001. Il ciclo di nuova taratura puo essere avviato dalla data di ricezione..

Certificato di taratura
Puesto que fabricamos nuestros instrumentos por lotes, puede que la fecha de su informe de prueba / certificado de calibración no esté al día. Asegúrese de que los instrumentos estén certificados en nuestro lugar de producción y estén almacenados en nuestro almacén conforme a nuestro sistema de control de calidad ISO 9001. El ciclo de recalibración puede empezar a partir de la fecha de recepción..

Déclaration de conformité
Konformitätserklärung
Conformity declaration

CE

Nom et adresse du fournisseur
Name und adresse des Lieferanten
Name and Address of the supplier

SYLVAC SA
Avenue des Sciences 19
CH 1400 – Yverdon-les-Bains

Nom et adresse de la personne autorisé à constituer le dossier technique
Name und adresse des zuständigen Leiter der technischen Dokumente
Name and Address of the responsible person for the technical folder

M. Daniel Schnyder
Lion d'Or 28
CH 2735 - Malleray

Déclare que le produit :
Erklärt dass das produkt :
Declares that the product :

Système de mesure optique
Optisches Messgerät
Optical Measuring System

SYLVAC SCAN S65/S65T

Type :
Typ : 902-4260,902-4265
Type :

N° de série :
Serien nummer : **53L00001**
Serial no :

Est conforme aux dispositions
Den folgendem Bestimmungen entspricht
Is in conformity with the provisions of

- Des directives Européennes
  Der Richtlinien
  The directive
  2006/42/CE ; 2014/30/EU et 2014/35/EU
- Des normes européennes
  Den Normen
  The standards
  EN 12100:2010 ; EN 60204-1 et EN 61326-1
- Et aux données techniques contenues dans nos documents de vente.
  Sowie den technischen Daten, die in unseren Verkaufsunterlagen angegeben sind.
  And technical data as specified in our sales documents.

Yverdon-les-Bains, le 01.10.2025

D. Schnyder
Responsable Qualité
Qualitäts-Leiter
Quality Manager