

## CONFIGURATION



### PGS 200 CNC Code: 3.101

The CNC configuration has the motorized positioning column that allow the instrument's calibration and the measure cycles to become automatic, guaranteeing big time-saving and high flexibility.

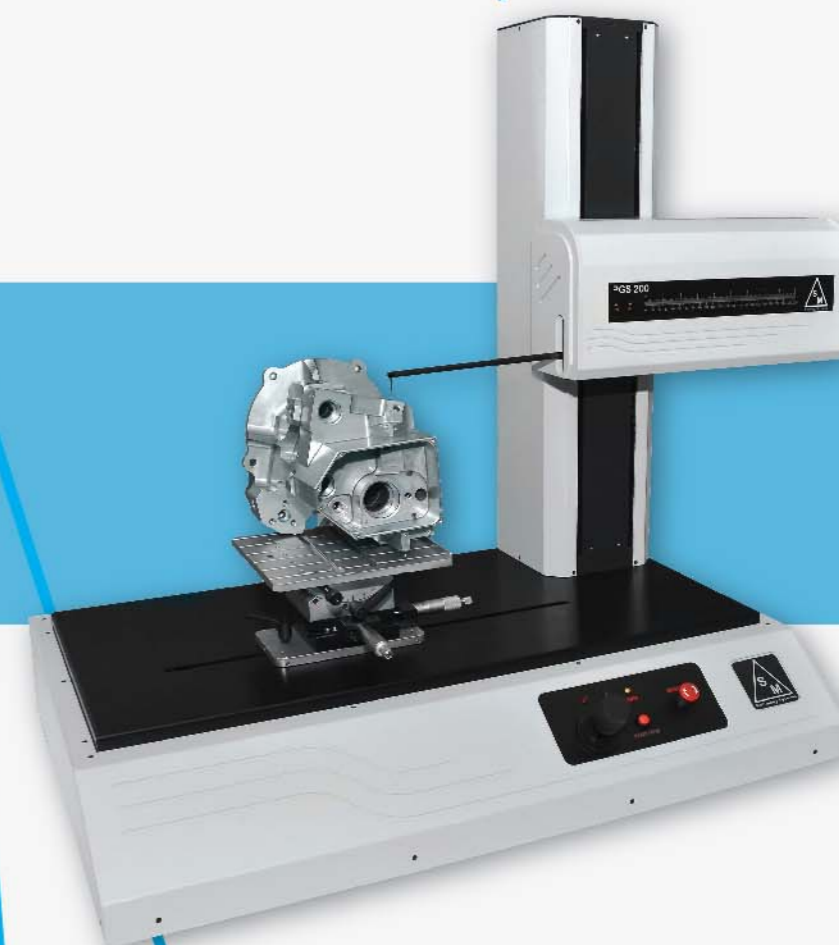
### PGS 200 manual Code: 3.100

The profilometer PGS 200 with a manual column is designed for those who don't need to do automatic positioning cycles. As with the motorized model the vertical range is 320 mm but is driven by the handwheel on the top.



# Profilometer PGS200

The best way to measure



[www.sm-instruments.com](http://www.sm-instruments.com)

## ACCESSORIES



### 3 AXIS POSITIONER

Code: 3.400

Allows to align the piece along X and Y axis and to rotate it around Z. It runs along the base to facilitate the positioning.



### 4 AXIS POSITIONER

Code: 3.401

In addition to the 3 axis positioner it allows to tilt the piece of  $\pm 30^\circ$



### VICE

Code: 3.403

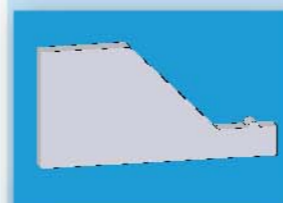
Rectified vice, 60 mm jaw, opening up to 42 mm, ready to be placed on 3 and 4 axis positioner.



### TRANSLATOR UNIT INCLINATOR

Code: 3.402

Allows to tilt the measuring head of  $\pm 30^\circ$ , simplifying the measure of bulky pieces.



### CALIBRATION SPECIMEN

Code 6.300

Specimen used to calibrate the machine, dimensions 45x45 mm<sup>2</sup> and radius 3 mm, with certificate.



### MOVABLE COLUMN

Code: 3.404

Moves the column and the measuring head outside the base to measure very big pieces.



### COLUMN OF 500

Code 3.405

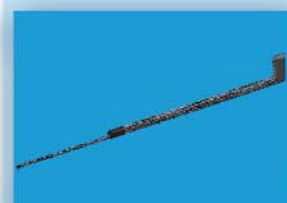
CNC motorized column with positioning range of 520 mm and total height of 700 mm



### MEASURING ARM

Code 3.305

Full measuring arm, carbon body and 32 mm tip



### MINIATURIZED ARM

Code 3.304

Full measuring arm for small holes (min  $\varnothing 8$ mm)



### ECCENTRIC ARM

Code 3.308

Arm with extension to 90° x 50 mm and 32 mm tip.

## TECHNICAL DATA

Unit system	Millimetres and inches
Evaluation length	220 mm (8.66 in)
Column	320 mm (12,6 in) o 520 mm, manual or motorized CNC
Range of measure	50 mm (1.97 in)
Sampling interval	0.5 $\mu$ m (0.02 $\mu$ in)
Axis Z resolution	0.2 $\mu$ m (0.008 $\mu$ in)
Positioning speed	0 ÷ 10 mm/s (0 ÷ 0,4 in/s)
Measuring speed	0,2 ÷ 2 mm/s (0,008 ÷ 0,08 in/s) o 0,2 - 0,5 - 1 - 2 mm/s (0,008 - 0,02 - 0,04 - 0,08 in/s)
Radius of tip	20 $\mu$ m (0.8 $\mu$ in)
CNC Cycle	Automatic measuring and positioning CNC cycle with autocomparing function
Connection type	USB interface for connecting to Windows® PC
Software languages	English, Italian, French, German, Spanish, Portuguese and Slovenski
LxDxH	1080x590x690 mm <sup>3</sup> (43x23x28 in <sup>3</sup> ) con colonna 500 1080x590x890 mm <sup>3</sup> (43x23x35 in <sup>3</sup> )
Total weight	42 kg (92 lbs)
Voltages	110-240V 50-60 Hz
Working temperature	15 - 25 °C (59 - 77 °F)
Software	Profile Studio



### TIP

Chisel (15° - R=20  $\mu$ m):

Tip 21mm - Code 3.300

Tip 31mm - Code 3.301

Tip 41mm - Code 3.302

Tip 51mm - Code 3.303

Spherical:

Ruby  $\varnothing 1$ - h32mm - Code 3.307

Ruby  $\varnothing 2$ - h32mm - Code 3.309

Metal  $\varnothing 1$ - h32mm - Code 3.306

Metal  $\varnothing 2$ - h32mm - Code 3.310

Centro ACCREDIA  
LAT N° 041

Can the control of a part be more difficult than its construction? We think not!

The profilometer **PGS 200** is the summary of this idea: ease of installation both in production environments and in metrology laboratory, high versatility and accuracy to be always confident of the results. Does measuring the details make you lose too much time? No longer with the new **PGS 200!**

## Top 10 reasons to choose the profilometer PGS 200

PGS 200

### Robustness

Alloy base that combines high toughness, light weight, elevated wear resistance and scratch

### Ease of use

Windows® software with wizards for complex operations (calibration, search maximum and minimum)

### Interchangeability

Wide range of interchangeable tips that can be changed directly by the operator

### Reports

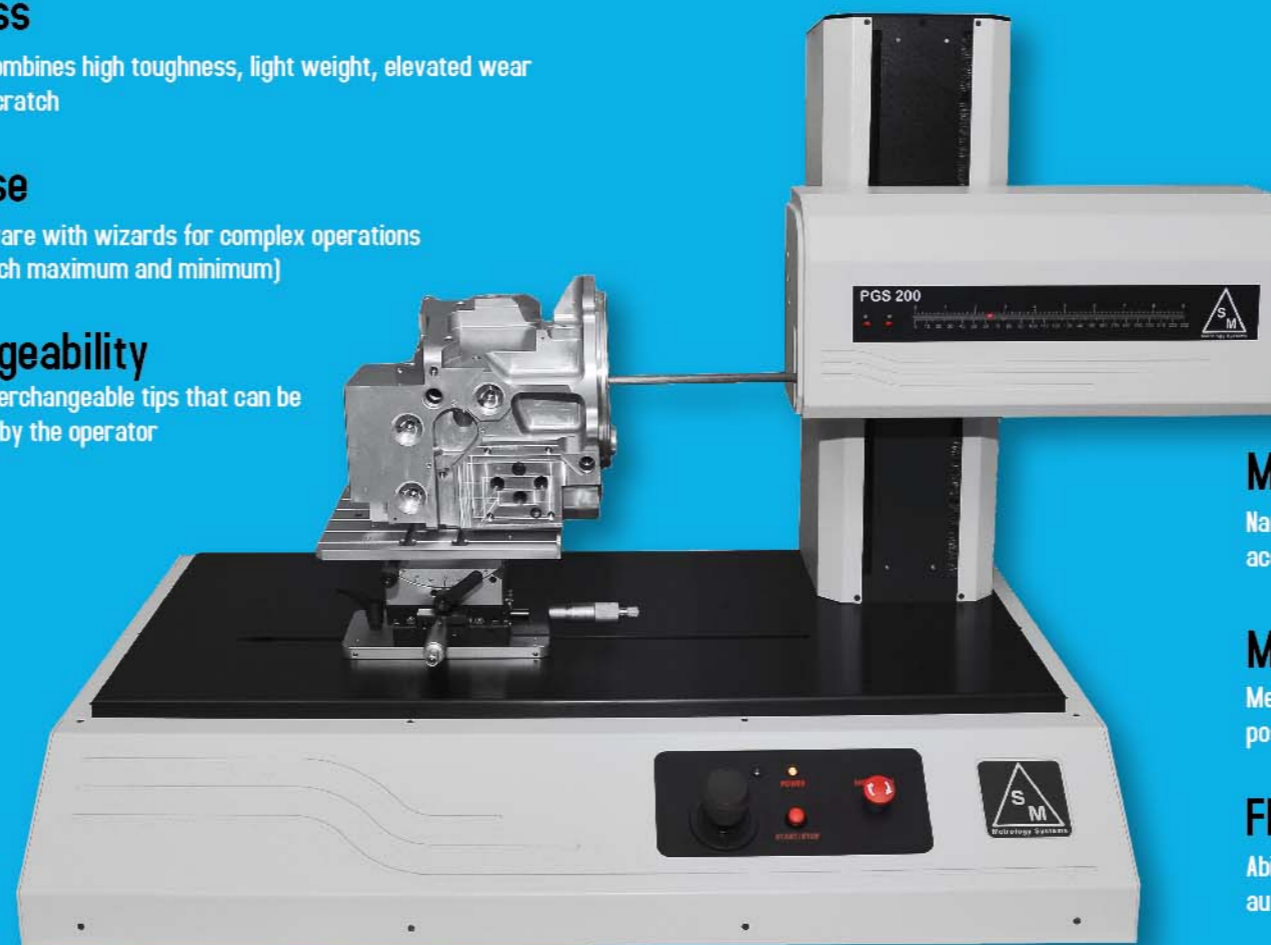
Ability to save and print many measurements reports

### Practicality

Small size and considerable weight reduction

### Connectivity

USB interface to the PC and only one cable to be immediately ready to measure



### Storage

The measurements can be saved to a file or to the database internal to the software

### Measuring accuracy

Nanometric internal sensors to ensure the most accurate and reliable results

### Manoeuvrability

Measuring range of 50 mm x 220 mm with motorized positioning column with a height of 320 mm.

### Flexibility

Ability to perform automatic measurement cycles and autocomparing measurements in series

## PGS 200

Following the "all in one" logic, the new **PGS 200** is ready to measure in few steps so in a very short time the user is able to make measurements even on the most complex particulars using the Profile Studio analysis software that is designed to be intuitive and easy to use.

The functions necessary for the characterization of the profile (arcs, lines, points, fees) are grouped in the right tool-bar and these are divided into families each presenting a different colour; on the left there is the tree of acquired measurements and also the interface used to control the instrument (tip's position, measurement settings, calibration). The CAD is a highly advanced: all entities are dynamic and modifiable after insertion.



Using the Best Fit feature you can put an arc or a line in the CAD with a single click because the software calculates automatically the minimum error zone in which the entity must be inserted. With the Autocomparing function you can rebuild on a new profile all entities and dimensional tolerances present in a reference. For control parts of the same lot it is possible to fit the instrument with a special positioner that runs along a guide for make the pieces loading and unloading very easy and fast!

For more complex details, the new **PGS 200** allows the execution of measuring cycles and, therefore, all obstacles (gorges, shoulder) are automatically overcome and at the end of the measuring the profile is reconstructed.

## SCREEN

