



Schneider

PMS Series



3D multi-sensor portal measurement machines

A high-end measurement machine for high precision measurement tasks providing reliable and reproducible results using the multi-sensor system.

SIMPLY PRECISE



3D multi-sensor portal measurement machines

The PMS series has a highly flexible design for small to large measurement volumes.

Fields of application for the PMS series

The stable portal construction of the measurement machine has not only been designed for measurement rooms but specifically to be used directly in the production hall. Completing measurements in close proximity to production thus significantly reduces non-productive times and saves money.

In addition to a high-resolution CCD camera, the tactile or scanning probe and/or the optional measurement laser ensures it is suitable for universal use in many industrial sectors. A rotating/pivoting head offers additional options for three-dimensional measurements using the probe system provided.

In the compact design of the PMS 300, the control cabinet is integrated in the basic machine to save space.



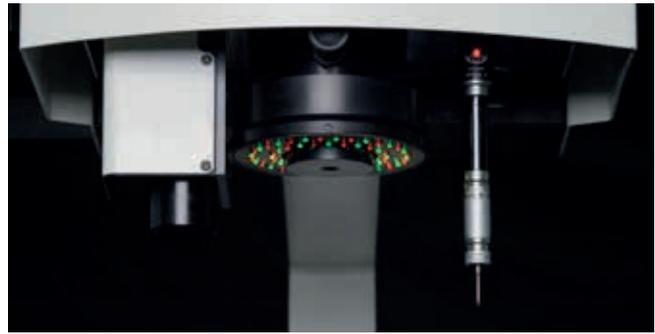
The base frame, including the measurement tables of the PMS 300-700 series are made entirely of granite. This guarantees the highest levels of stability and reproducible measurement results.



For more detailed information, please visit our website at www.dr-schneider.de

Options for the PMS series

- Tactile sensing probe TP200
- Tactile scanning probe SP25
- Switchable sector incident light
- 2D and 3D digitisation/BestFit
- Conoscopic measurement laser
- Motorised rotating/pivoting head PH10
- Motorised zoom with coaxial incident light



Unique: The probe only extends during measurements thus ensuring there is no risk of collisions when using other sensors.

Special features for the PMS series

- Measurements and evaluations of all probes completed with one software application
- Dust-protected precision guides
- Mechanically protected cabling
- Robust granite table with high level of rigidity
- Fast measurements with high level of precision

Additional highlights of the PMS series

- Cost-effective, customer-orientated solutions can be implemented thanks to modular design
- Additional sensors can be retrofitted at any time
- Excellent price/performance ratio
- Temperature stability guaranteed by compact, stable granite construction and optional temperature compensation available for the workpiece and machine
- CONFORMITY provides fully compliant program and measurement data management in accordance with 21 CFR Part 11 FDA (Code of Federal Regulations Title 21 Part 11 "Electronic Records, Electronic Signature"; Food and Drug Administration USA/GMP)



Machines shown may include optional accessories.

PMS LL series

The PMS LL series combines the highest level of precision and flexibility at an optimised measurement speed

Fields of application for the PMS LL series

The development team in Bad Kreuznach, Germany, has achieved a milestone for measurement technology by developing the PMS LL series. It has the smallest dimensions, while offering maximum precision via all of the sensors using an above-average measurement volume. The PMS LL uniquely combines maximum precision with speed and flexibility.

The individual configuration options meet every possible requirement.

High resolution matrix camera with 1.4 megapixels, telecentric precision lenses with fixed focal length or motorised zoom function, LED transmitted light and LED sector incident light, rotating/pivoting head PH10 with tactile sensing 6-way probe TP200 or tactile scanning probe SP25, conoscopic mealaser, fully integrated CNC rotation axis and individual software options ensure that the configuration of every measurement task is affordable and effective.

Also easily implemented with medical technology – CONFORMITY provides fully compliant program and measurement data management in accordance with 21 CFR Part 11 FDA (Code of Federal Regulations Title 21 Part 11 "Electronic Records, Electronic Signature"; Food and Drug Administration USA/GMP)



Standard features for the PMS LL series

- 3-axes CNC control
- 1.4 megapixel CCD camera
- Telecentric precision lens
- Telecentric LED transmitted light
- SAPHIR measurement and analysis software

Additional highlights offered by the PMS LL series

- Sophisticated modular system
- Compact design
- Individual measurement ranges upon request

Options for the PMS LL series

- 5-axes CNC control
- Tactile probe TP200 and SCR200 changer unit
- Scanning probe SP25 and FCR25 changer unit
- Motorised rotating/pivoting head Renishaw PH10
- LED sector incident light
- Coaxial scanning point laser
- Active temperature compensation of machine and workpiece
- 2D and 3D digitisation/BestFit
- Full granite support plate for rotation axis integrated in the measurement table

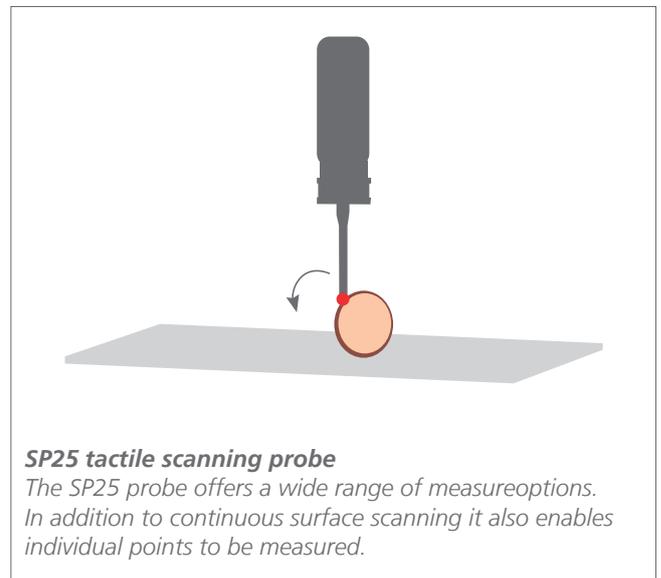
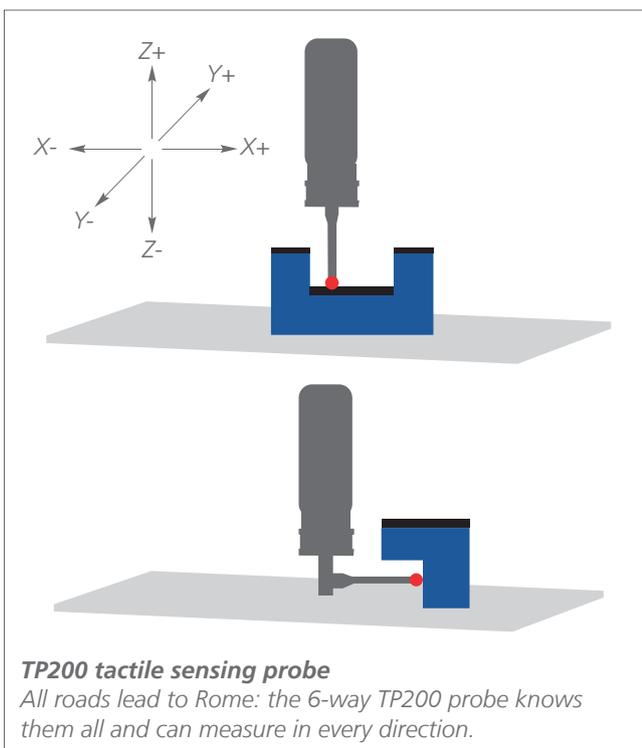
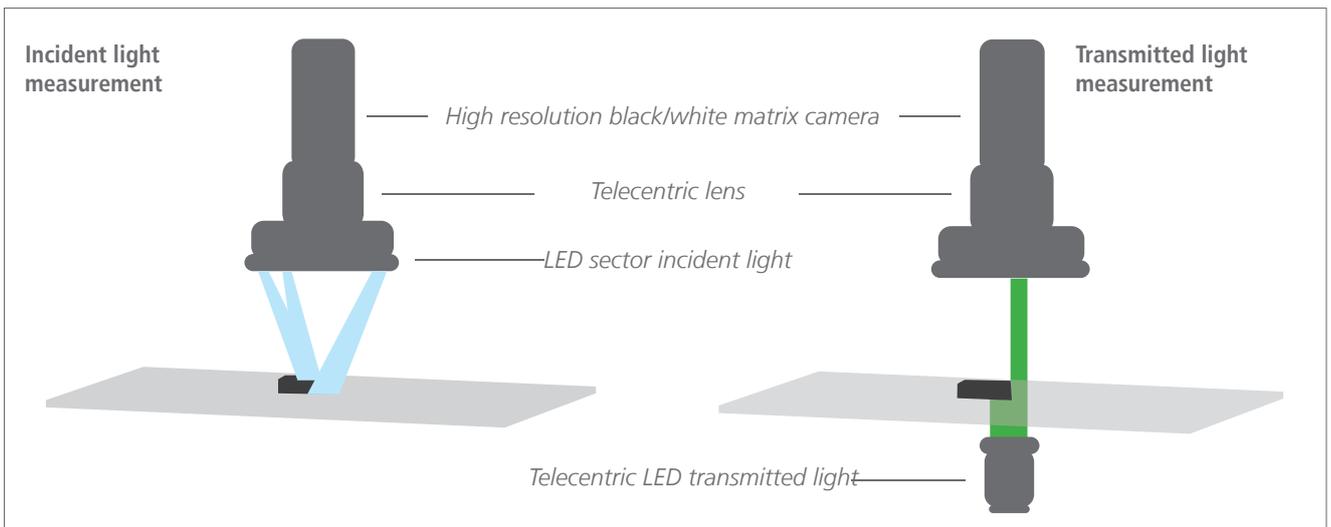
Special features for the PMS LL series

- Air suspension in all axes
- Rigid and precise granite design
- Total height of 2300 mm with 600 mm Z measurement range



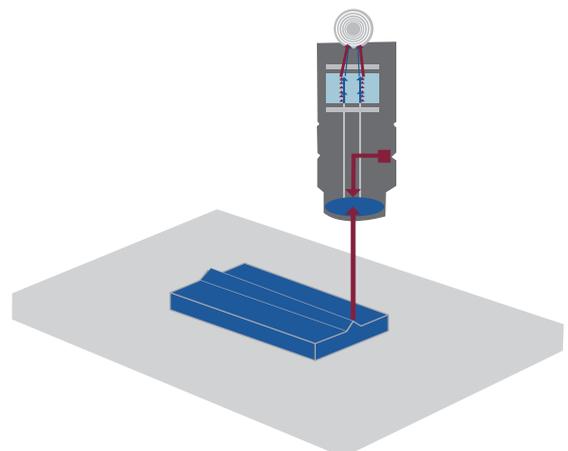
PMS sensor technology

Modern multi-sensor measurement machines from Dr. Heinrich Schneider Messtechnik offer a broad range of options for the application-specific configuration with measurement sensors.



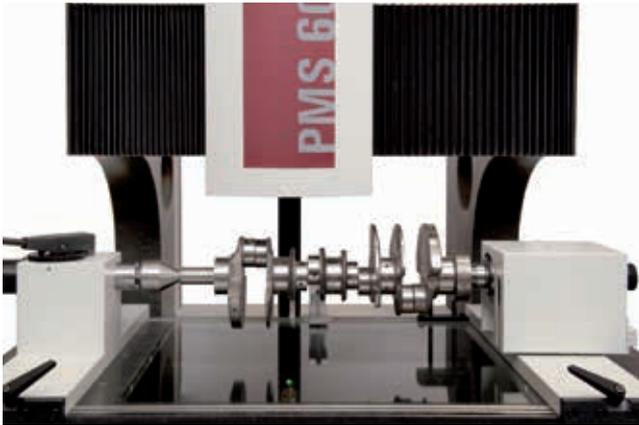
Conoscopic measurement laser

The conoscopic measurement principle guarantees accurate three-dimensional measurements. There is no contact with the workpiece, thus enabling soft workpieces or workpieces, which must not be touched during the scanning process, to be measured accurately. In addition to the accurate designation of planes, blind bores, grooves, and other characteristics on the surface can also be measured and determined geometrically.

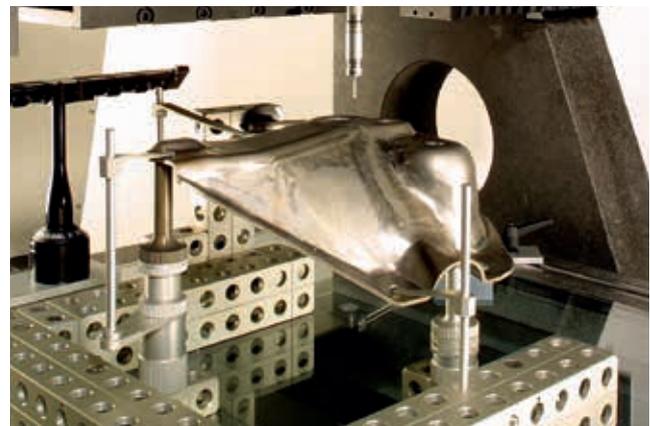
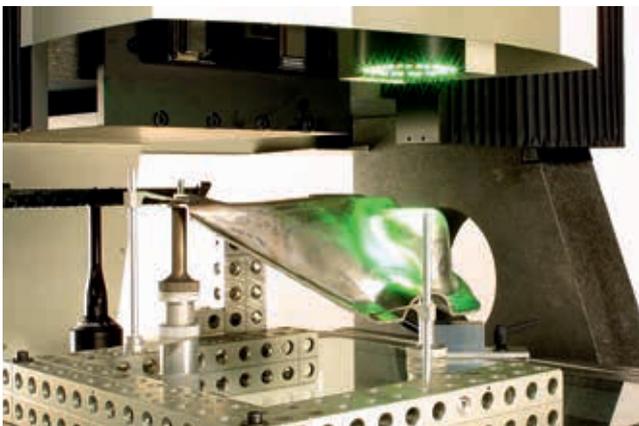


The perfect solution for every task

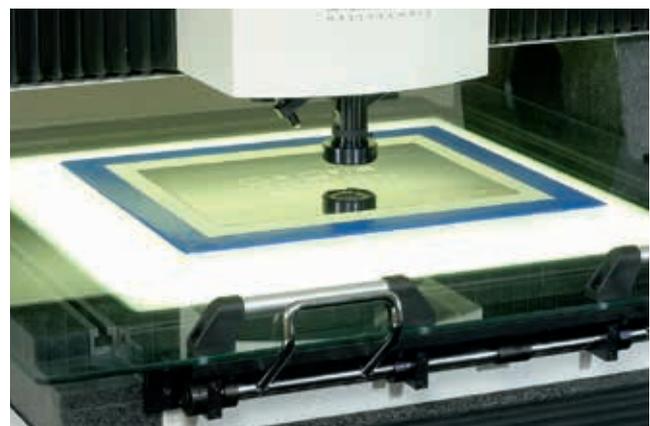
The PMS series offers plenty of room for customer-specific adjustments to individual measurement tasks.



The optional rotation axis, with or without a mount, is available as a fully integrated and infinitely variable CNC axis with standard or customised interfaces.



Amorphous shapes, such as freely formed sheet metal parts, can be measured without any difficulties on the PMS series. We can provide a complete package containing the clamping systems required for this purpose.



A pressure plate can be used to place and measure thin foils on the measurement table ensuring they are reproducible.

SAPHIR measurement and analysis software

Efficient, economic workflows start with the choice of equipment. SAPHIR is a tailor-made software system that covers all of your requirements. For further information, please request our free "SAPHIR" brochure.



The latest news and information can also be found on our Facebook page.



Interesting product videos and useful information are available on YouTube.

Technical specifications of the PMS series

Model	PMS 300	PMS 400	PMS 500	PMS 600	PMS 700	PMS 500 LL	PMS 900 LL	PMS 1200 LL		
Measurement range	other measurement ranges available upon request									
mm	X 300	X 400	X 500	X 600	X 700	X 500	X 900	X 1200		
mm	Y 300	Y 400	Y 500	Y 600	Y 700	Y 500	Y 900	Y 1200		
mm	Z 300	Z 300	Z 300	Z 300	Z 300	Z 400	Z 600	Z 600		
Lens with fixed focal length	telecentric									
magnification	1.0x	1.5x	3x	5x	10x	1.0x				
image field mm	6 x 4.5	4 x 3	2 x 1.5	1.2 x 0.9	0.6 x 0.45	5.6 x 4.2				
working distance mm	190	80	80	50	24	190				
Lens zoom	telecentric									
magnification	0.5x to 7.0x									
working distance	86									
Resolution	mm	0.0001								
Max. movement speed	mm/s	100								
Max. acceleration	mm/s ²	400								
Positioning accuracy	mm	0.0001								
Max. workpiece weight										
on glass plate	kg	20								
on granite support plate	kg	200								
Length measurement error¹⁾		measurement length L in mm								
optical (1D), DIN EN ISO 10360-7 ²		E _{UX} MPE = (1.3 + L/300 mm) μm E _{UY} MPE = (1.3 + L/300 mm) μm					E _{UX} MPE = (0.9 + L/600 mm) μm E _{UY} MPE = (0.9 + L/600 mm) μm			
optical (2D), DIN EN ISO 10360-7 ²		E _{UXY} MPE = (2.0 + L/300 mm) μm					E _{UXY} MPE = (1.2 + L/500 mm) μm			
tactile (1D), DIN EN ISO 10360-2 ³		E _{OX} MPE E _{OY} MPE = (1.3 + L/300 mm) μm					E _{OX} MPE E _{OY} MPE = (0.9 + L/600 mm) μm			
tactile (2D), DIN EN ISO 10360-2 ³		E _{OXY} MPE = (2.0 + L/300 mm) μm					E _{OXY} MPE = (1.2 + L/500 mm) μm			
tactile (3D), DIN EN ISO 10360-2 ³		E _O MPE = (2.8 + L/300 mm) μm					E _O MPE = (1.9 + L/400 mm) μm			
Dimensions	mm	W 820	W 950	W 1100	W 1210	W 1310	W 1650	W 2050	W 2350	
		D 1040	D 1190	D 1190	D 1730	D 1930	D 2560	D 2800	D 3800	
		H 2060	H 1960	H 2110	H 1960	H 1960	H 2110	H 2350	H 2350	
control cabinet	mm	800 x 800								
workstation 130	mm	1300 x 900								
Weight	kg	900	1500	1900	2600	2800	5000	7500	10500	
Electric power supply		220-240 VAC, 50-60 Hz								

¹⁾ Conditions: admissible ambient temperature 20 °C ± 1 K, temperature gradient Δ_{th} = 0.5 K/h, Δ_{td} = 4.0 K/d

²⁾ β = magnification factor = 1,5 Δ lens 1.5x (image field 4 x 3 mm)

³⁾ For optional design with TP200 or SP25, standard probing system with straight probe length 50 mm, probe tip ø 4 mm