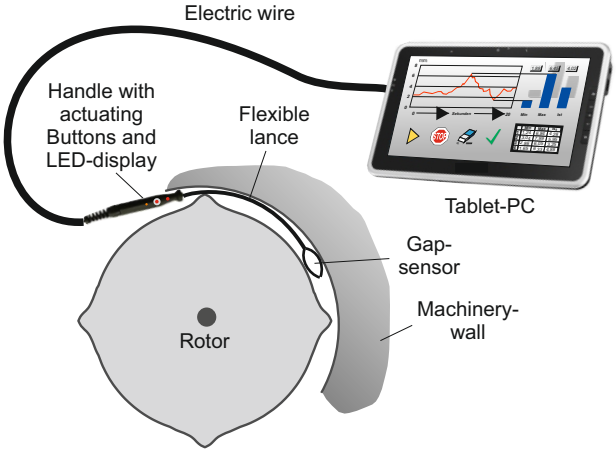
Process monitoring
Information management
Quality assurance

Gap measuring device gapMaster®

Ideas for your success

Technical information

Measuring principle



The patented measuring method is based on the surprisingly effective combination of proven resistance measuring technology and sophisticated sensor design.

The tactile gap sensor contacts the gap wall with its range springs, whereby the deformation of the springs is converted into electrical signals.

This principle is independent of material and surface and has low measuring forces. Resolutions of up to 1 µm are possible with comparatively long measuring travel and low sensitivity to interference.

The measurement signal is digitally converted and transmitted via USB to a handy mobile device with touch screen and convenient operation. Test plans with semi-automatic processing can be configured for fast and reliable measured value recording.

Process comparison

The principle of the gapMaster® offers many advantages and unique features compared to other gap measurement methods. For example, the measurement in the gap can practically only be carried out with the gapMaster® and provides information on the gap contour. This leads to new possibilities and findings in almost all technical sectors.

Due to the material and surface independence of the gapMaster®, it is used for steel, plastic, wood, graphite and other materials.

Easy and fast operation, objective measurement results and clear documentation are ensured by practical functions and advanced data interfaces up to LTE compared to other gap measurement methods.

Unique selling point

Gap measurement method								
Principle/ Device	Application fields	Measure-ment in the gap	con-tact-less	Reso-lution	material indepen-dent	surface indepen-dent	radius inde-pendent	Costs / Time savings
Laser	bodywork, automobile, aircraft	- -	+ +	+ +	+ +	- -	-	- -
Capacitive	aircraft, roller distance	o	o	+ +	- -	-	o	- -
Feeler gauges	turbines, fan,mixer, vehicle interior	-	-	o	+ +	+ +	o	o
gapMaster	**All areas**	+ +	-	+ +	+ +	+ +	+ +	+ +
Spies	moldings, bodywork	-	-	- -	- -	- -	o	o
Wedges Cones	jet, ventilator, turbines	- -	-	o	- -	- -	- -	o

++ : very + : good o : OK - : bad - - : very bad

Gap measurement methods

Technical Specifications

Sensor

Gap thickness:	min. 0,20 mm max. > 10 mm
Measuring range:	min. ca. 0,50 mm max. ca. 6 mm
Measuring depth:	1,5 - 950 mm
Measuring force:	min. ca. 0,5 N max. ca.1,5 N
Resolution:	0,001 - 0,003 mm
Accuracy:	0,03 - 0,05 mm
Basic hardness:	700 HV
Surface hardness:	100 - 2000 HV depending on requirements

Electronics

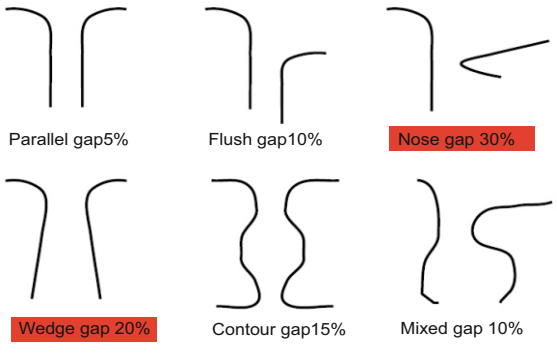
Measuring frequency:	50 Hz Android®, 80 Hz Windows®
Resolution:	14 Bit
Interface:	USB-Micro 2.0 optional USB-A 2.0
Display:	1 LED
Service:	1 button
Cable length:	2 m

Mobile device

Screen:	Touch-Screen 7”
Protection:	IP54 Front, impact protection case
Setting:	with stand optional magnet holder
Dimensions WHD:	115 x 195 x 20 mm
Weight:	416 g

Standardization

Gap measurement in the standardization



Gap types in technical areas

The comprehensive application possibilities of the gapMaster® measuring principle allow the systematic analysis and structuring of the gap measurement.

This should be published in a series of standards of the German Institute for Standardization DIN. The content of this standard will be from conceptual clarification to other fundamentals to various applications.

The gap type expresses the essential geometric relationships of a gap, which are fundamental to its measurement. For example, the frequently occuring types of nasal and wedge gaps can not be visually measured. Conventional feeler theory fails in more than half of the measurement tasks.

MFP - Competence in Gap

Patents

MFP owns patents, approvals and property rights for various products and processes.

Developments

The invention of the gapMaster® gap measuring device has led to many developments in this field. With over 30 years of experience in measurement technology, MFP supports its customers in gap measurement with optimized sensors, tuned software for Android® and Windows® as well as the latest electronics.

Team and Partners

We and our national and international partners are happy to pass on to you our extensive know-how in gap measurement technology, which we have gathered in almost all industries since the development of gapMaster®.

Have we aroused your interest?

Ask for more information. Our team is at your disposal for further information.

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B.P.06.21