Process-
monitoring

Information-
management

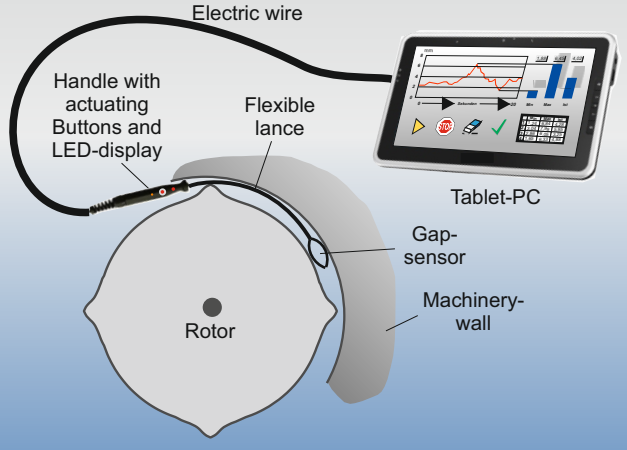
Quality
assurance

The electronic feeler gauge

Gap measuring device gapMaster

Ideas for your success

Measuring principle:



We have developed the gapMaster for tasks where laser-optical and other measurement methods due to poor accessibility, reflective surfaces or different materials are unusable.

Measurement inside the gap

With its thin measuring lance it can even penetrate into depths, which are outside the visual range. For example in the measurement on rotary machines as well as in the determination of internal contours.

Independence of material and surface

The tactile sensor is independent of material and surface and has low measuring forces. The handy mobile device has a touch screen for display and operation. For the fast and reliable recording of measured values, test plans with semi-automatic processing can be configured. The data is stored locally and retrieved via USB or automatically transmitted via WiFi.

Variants

Interchangeable sensors

We provide the right equipment for precise measurement of different characteristics for various measurement tasks.

With the interchangeable sensors of the gapMaster, many applications are covered.

Depending on the requirements, straight or angled sensors can be used.

The sensor electrode, when immersed in a gap, determines the wall spacing by tactile probing. A special feature is the flexible sensor lance. The sensor can also be used on difficult-to-reach measuring points.

With coordinated software, different measuring processes are evaluated quickly and reliably.

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 + : 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

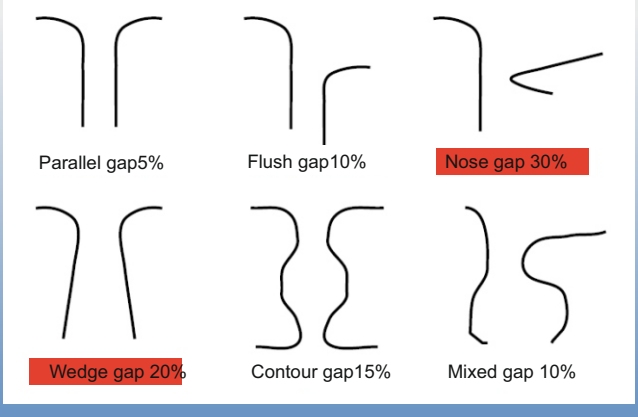
Measuring frequency:	50 Hz Android®, 80 Hz Windows®
Resolution:	14 Bit
Interface:	USB-Micro 2.0
	optional USB-A 2.0
Display:	1 LED
Service:	1 button
Cable length:	2 m

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.

Patents

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

Developments

The invention of the gap sensor offers a lot of room for further developments in this field. Against the background of 30 years of experience, MFP has set itself the task of supporting its customers in the gap measurement with optimized sensors, matched software for Android® and Windows® as well as latest electronics.

Team and partners

We and our national and international partners will be pleased to pass on our extensive know-how in gap measurement technology, which we have gathered at the most diverse measurement projects and in almost all sectors since the invention of the gapMaster.

MFP - Competence in Gap Measurement

Have we aroused your interest?

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

Technical changes reserved

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