

## Efficient gloss measurement makes your QC faster

The first micro-gloss became the industry standard in gloss measurement. The new micro-gloss combines the well known ease-of-use and protected calibration in the holder with a new and unique functionality – designed for today's QC standards.

### In the lab, in production, at the customer ...

the micro-gloss is always ready, including calibration holder. Small as a digital camera – it is safe in your hand. Thanks to a well structured menu and a new scroll wheel the operation is easier than ever before.



### Auto diagnosis: Standard OK - Calibration OK

The calibration standard is always protected and exactly positioned in the holder. New: the intelligent auto diagnosis tells you when to calibrate and even checks whether the standard is clean. Operator friendly. Safe.



## Always accurate gloss values

With the new micro-gloss you can measure any material - paints, plastics or highly reflective metals. Its new expanded measurement range of up to 2000 gloss units guarantees always reliable results – according to international standards and DIN-approved\*.



\* approved by the BAM (Federal Institute of Material Research and Testing, Germany)

The long-term stable light source and patented illumination control provide a superior accuracy for many years. Lamp changes will no longer be needed, we even give you a 10 year guarantee on the lamp life.

## Optimally tailored to all your measurement needs

Different tasks ask for different tools. The easy to turn scroll wheel quickly shows you all needed functions – even without a PC:

Check uniformity on the sample?

→ Continuous mode. With Min. and Max.

Compare the difference to the target?

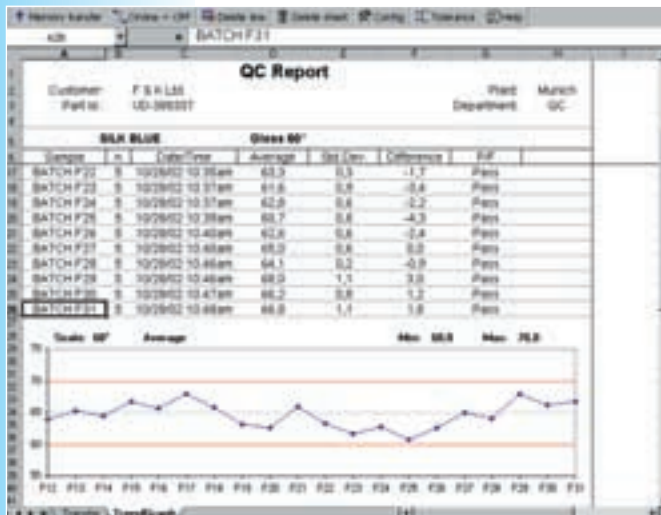
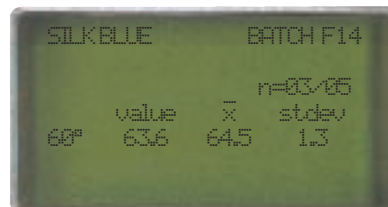
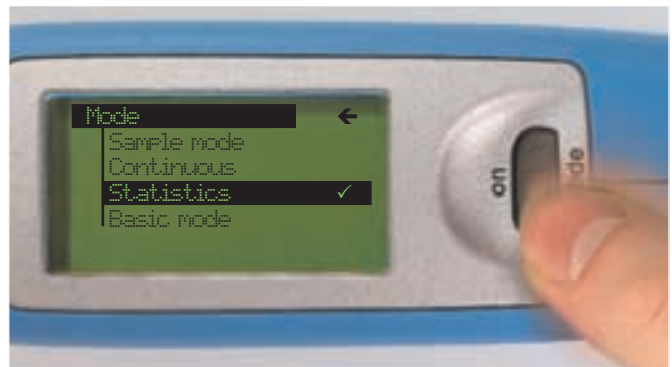
→ Difference mode. With Pass/Fail.

Average several readings per panel?

→ Statistic mode. With all statistical data.

Number of readings per sample are selectable.

Or just check a few samples in between for a colleague?  
Use the Basic mode to interrupt the series and operation is reduced to the simplest task.



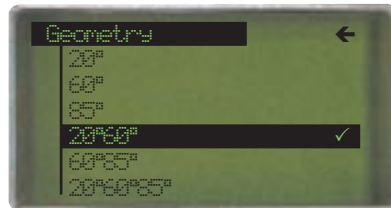
## Fast and professional documentation

Every measurement series can be saved under its own name. Input of sample names can be done quickly with the scroll wheel.

The included software easy-link allows direct data transfer to Excel® and your results are immediately shown in a professional QC-report (see page 20).

**micro-TRI-gloss:**  
**Recognize deviations from the specification – right away**

20°, 60°, 85° in one – as handy as the one angle unit. Having three geometries in one unit allows you to be in compliance with international standards and to quickly recognize quality variations.

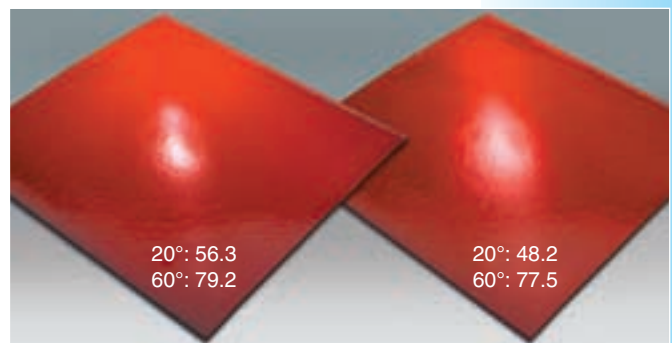


All selected geometries are measuring at the same location and the results are displayed instantly – including Difference, Pass/Fail and Statistics.

The micro-TRI-gloss has all functions of the new generation readily at hand.



In order to obtain differences clearly over the whole range from matte to high gloss, three measurement geometries were specified in international standards. Each geometry is optimized for a specific gloss range.



The different appearance of these two samples only shows in the 20° readings.

**The new micro-gloss family:**  
**Overview of functions**

<b>Continuous</b>	actual value, average, min., max.	<b>Long-term calibration</b>	with automatic check of the calibration standard
<b>Difference and Pass / Fail</b>	memory for 50 references with limits	<b>Autorange</b>	0 - 2000 GU (20°) 0 - 1000 GU (60°) 0 - 160 GU (85°)
<b>Statistics</b>	Number of readings per sample are selectable from 2 to 99	<b>Measuring time</b>	0,5 seconds / geometry
<b>Display in 3 columns selectable</b>	actual value, average, std. dev., min., max., range, difference, pass/fail	<b>Menu guidance switchable in</b>	English, Spanish, German, French, Italian, Japanese
<b>Memory</b>	999 readings with date and time, with recall function	<b>Auto shut-off time</b>	selectable 10 - 99 seconds
<b>Interface Software</b>	serial RS 232 easy-link (included)	<b>Power</b>	one 1.5V Mignon Alkaline Battery 10 000 readings or external power supply
<b>Especially micro-TRI-gloss</b>	Simultaneously display 2 or 3 geometries	<b>Operating temperature</b>	15 - 40 °C (60 - 104 °F)
		<b>Relative humidity</b>	up to 85 %, non-condensing

Ordering Information		Technical Specification		
Cat. No.	Description	Geometry	Application	MeasuringArea
D-4420	micro-gloss 20°	20°	high gloss	10 x 10 mm (0.4 x 0.4 in)
D-4460	micro-gloss 60°	60°	semi gloss	9 x 15 mm (0.35 x 0.6 in)
D-4485	micro-gloss 85°	85°	low gloss	5 x 38 mm (0.2 x 1.5 in)
D-4430	micro-TRI-gloss	20°, 60°, 85°	universal	see single angle
DE-4420	Extended Warranty one-year additional			

<b>Comes complete with:</b> Instrument Holder with integrated calibration tile Traceable certificate Software easy-link PC-cable Operating manual Battery Carrying case	<b>Dimensions</b> Height: 73 mm (2.9 in) Length: 155 mm (6.1 in) Width: 48 mm (1.9 in) Weight: 400 g (0.9 lbs)	<b>Range</b> 0 - 99.9 GU	<b>Repeatability</b> 0.2 GU	<b>Reproducibility</b> 0.5 GU
		100 - 2000 GU	0.2 %	0.5 %

Standards		
ASTM	D 523	D 2457
ISO	2813	7668
DIN	67530	
JIS	Z 8741	



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## Replacements and Accessories

Ordering Information		Technical Specifications
Cat. No.	Description	
D-4403	Power supply, EU	For external power supply, 90 - 264 V self adapting, European plug
D-4404	Power supply, US	For external power supply, 90 - 264 V self adapting, USA plug
D-4401	USB-adaptor	For connection to USB-interface, incl. driver software
D-4545	BYKWARE easy-link	Software for direct data transfer and documentation in Excel® (see page 20)
D-4400	PC-cable	For data transfer to a PC, RS 232 Sub-D 9-polig

**Calibration Holder**

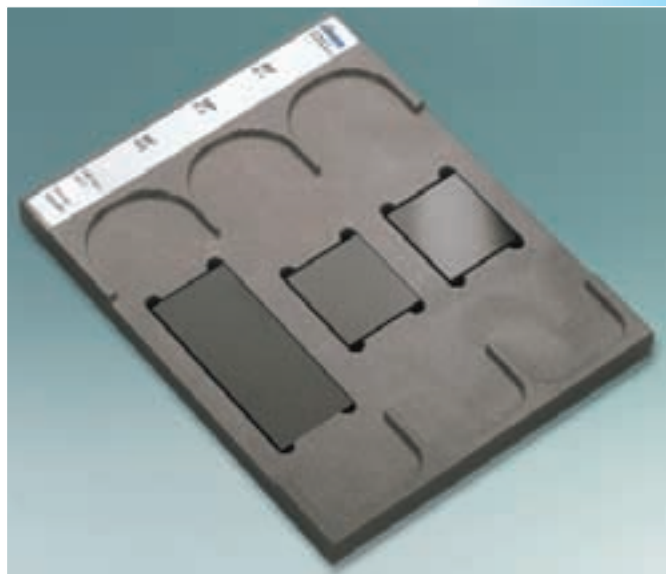


**Checking Standard**

In order to control the performance and linearity of the glossmeter it is recommended to use a checking standard periodically. The control interval is dependent on the usage conditions of the glossmeter.

The gloss tiles are built into an aluminum track that the instrument fits into to guarantee accurate and repeatable measurements. The included certificate is traceable to international institutes.

Ordering Information		
Cat. No.	Description	
D-4421	Calibration holder 20°	Replacement
D-4461	Calibration holder 60°	Replacement
D-4486	Calibration holder 85°	Replacement
D-4431	Calibration holder TRI	Replacement
<b>Comes complete with:</b> Holder with integrated calibration tile and traceable certificate		



For Recertification and Calibration Services see page 171 / 174

Ordering Information		Technical Specifications	
Cat.No.	Description	Dimensions	
D-4422	Checking standard 20°	170 x 90 x 15 mm (6.7 x 3.5 x 0.6 in)	High and semi gloss tile
D-4462	Checking standard 60°	170 x 90 x 15 mm (6.7 x 3.5 x 0.6 in)	High and semi gloss tile
D-4487	Checking standard 85°	170 x 90 x 15 mm (6.7 x 3.5 x 0.6 in)	High and semi gloss tile
D-4432	Checking standard TRI	170 x 130 x 15 mm (6.7 x 5.1 x 0.6 in)	3 semi gloss tiles 20, 60, 85°
D-4433	Checking standard mirror	170 x 130 x 15 mm (6.7 x 5.1 x 0.6 in)	3 semi gloss tiles 20, 60, 85°
<b>Comes complete with:</b> Checking standard in aluminum track with traceable certificate			

VIET NAM AGENTS :

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