Paint Test Equipment

Stargloss Gloss Meter Data Sheet

Stargloss

Gloss and Haze measurement is essential where an aesthetic appearance of the coating finish is required and to ensure uniformity of the surface finish.

The gloss value is determined by directing a light, which has a similar wavelength to the human eye, at the test surface and measuring the amount of specular reflection. Gloss is measured with angles of 60° and 20°. The 60° angle is universal for all applications. The 20° angle gives improved differentiation of measurement on high-gloss coatings above 70 gloss units.

Haze measurement is required where high-gloss surfaces have a low reflection contrast. The Haze measurement is the difference between readings taken with the 20° and 60° angles, complying with International Standard ASTM D4039. The Stargloss will automatically calculate the Haze reading. The Haze function is only available on combined 60°/20° models.

Small and portable, the Stargloss is one of the most advanced Gloss Meters available. By using tungsten halogen lamps and optical filters the light source has a similar spectro-response to the human eye, giving true human photo-optic performance, which is essential for ensuring exact compliance to International Standards. Optical bench accuracy and stability are obtained by the optics being set in a precision-engineered aluminium block.

Available in models of Standard and Top. All functions are easily accessible through a menu-driven back-lit display.

Complies with International Standards

ISO 2813	ASTM D 584
ISO 7668	ASTM D4039
BS 6161-12	DIN 67530
BS 3900-D5	AS 1580-602.2
ASTM D 523	ECCA T2
ASTM D 1455	

Standard Models

Calibration
Calibrate on the supplied Gloss Standard or any other value Gloss Standard.

Statistics
Continually shows Mean, Number of Readings, Max / Min, Coefficient of Variation and Standard Deviation.

Hi / Lo Limits
Pass and fail with audible and visual alarm.

Top Models

All the functions of the Standard Model plus the following:

Batching
Measurements that are taken can be stored into batches which incorporate batch number, unique job number, and date and time. You can also go back to previous batches and look at the statistics and add or cancel readings from previous batches.

Download
Allows all measurements, statistics and out-of-limit readings to be downloaded to a computer either by batch number or job number into Microsoft Word or Excel. Your company name can appear on every download if required.

Part No	Model Type	Angle	Range	Resolution	Repeatability	Accuracy	Cal Cert Part No	Tile Cert Part No	PAT Cert Part No
G2001	Standard	60°	0–100GU	0.1GU	0.2GU	±1%	NG001	NG002	NGT01
G2002	Standard	60°/20°/Haze	0–100GU 0–100HU	0.1GU 0.1HU	0.2GU 0.2HU	±1%	NG001	NG002	NGT01
G2101	Top	60°	0–100GU	0.1GU	0.2GU	±1%	NG001	NG002	NGT01
G2102	Top	60°/20°/Haze	0–100GU 0–100HU	0.1GU 0.1HU	0.2GU 0.2HU	±1%	NG001	NG002	NGT01

Calibration Certificates with traceability to BAM (for the Stargloss and Tile) and PAT Certiicate (for the Recharger) are an optional extra. The Certificates are supplied in a paper format and are available online through the Calibration Portal (under Browse Categories) on this website. The Calibration Portal will list all your equipment that is calibrated by Paint Test Equipment, showing the renewal dates and allowing Calibration Certificates to be viewed at any time.

All models are supplied in an Industrial Foam-Filled Carrying Case with Gloss Standard and Charger. Top Models also come with USB Download Cable and Download Software.

Operation

Switch On / Off
To switch the Stargloss on, press the On / Off keypad for approximately 1 second. The display will show the last reading taken. The instrument will automatically switch off after approximately 5 minutes if no readings have been taken. The instrument can also be switched off by pressing the On / Off keypad again.

Taking Readings
Observe the location of the oval measuring hole (25mm x 12mm) located on the base of the instrument, which is the location where the gloss readings will be made. The location is identified by the arrows on the front and each side of the case. Place the Stargloss onto the object to be measured and press the Read keypad. The reading will be held on the display until another reading has been taken. Always ensure that the surface being measured is flat, and large enough to cover the oval measuring hole.

Readings on the same surface can vary if the light angle onto the surface is changed (the light source is from the left when looking at the front of the Stargloss).

Menu
All functions are accessed through a menu-driven display in the categories shown below. To scroll through the menus use the up and down arrows and enter where you see the arrow symbol on the right of the display. When you are in the Menu and you want to exit, press the Menu button again and the instrument will revert back to normal measurement mode.

Angle	This function is only available on combined 20 / 60 / Haze models. On Stargloss Top Models with batching turned on, when the angle is being changed there will be a request for Enter Job No, as different angles cannot be contained in the same batch.
Select 60°	The 60° angle is universal for all applications.
Select 20°	The 20° angle gives improved differentiation of measurement on high-gloss coatings above 70 gloss units.
Select Haze	Haze measurement is required where high-gloss surfaces have a low reflection contrast.

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Calibration		Always ensure that the Gloss Standard and the base of the Stargloss are clean before calibrating. To clean the Gloss Standard, wipe with a soft paper towel moistened in warm water containing a small amount of detergent, then wipe dry with a soft paper towel.
	Operator Cal	For the highest accuracy of measurement, the Stargloss has a variable calibration facility. The calibration is carried out by placing the Stargloss in the Gloss Standard ensuring that the measurement area is correctly located on the gloss tile. Calibration can then be carried out by entering the Gloss Standard value.
	Factory Cal	When selected this will reset the instrument to a standard calibration. If you are using a combined 60° / 20° / Haze instrument, the calibration is only reset to the angle that you have selected. The Gloss Standard is not required for this calibration. Limit settings, if selected, will be cleared.
Clear Memory		Clears the instrument memory of all batches and stored readings. Does not affect calibration values.
Statistics		At any time the appropriate Statistics can be displayed on the lower line of the display. The Statistics will be automatically updated when additional readings are taken.
	Mean	Average of all readings.
	Number Readings	Number of readings taken.
	SDV	Standard Deviation of readings taken.
	Coefficient	Coefficient of variation of readings taken (SDV/Mean)*100.
	Maximum	Maximum reading.
	Minimum	Minimum reading.
	Statistics Off	Removes the displayed Statistics.
Batching		This function is only available on Stargloss Top Models. Multiple batches can be stored to a maximum of 10,000 readings.
	Batch Store	Readings taken can be stored in a batch and a job number allocated (up to 12 digits). Multiple batches can be stored with a maximum of 100 readings per batch. The 100th reading taken will automatically enter into a batch and you will be asked to enter the job number.
	Batch Recall	Previous batches stored can be recalled either by batch number or by job number, so that further readings can be added. Statistics viewed or job number can be changed.
	Auto Batch	A batch quantity can be allocated and the instrument will automatically enter the batch and you will be asked to enter the job number when this quantity of readings has been taken (the maximum batch limit is 99 readings).
	Batching On/Off	Always ensure that Batching is On if you need to store readings. When you do not need to store readings switch the Batching Off. This will allow you to take readings further than 100 without automatically being stored into a batch. When changing angles on 60° / 20° / Haze instruments with Batching On, your readings will automatically be entered into a batch and you will be asked to enter the job number.
Download		This function is only available on Stargloss Top Models. This enables the batches stored to be downloaded to a computer with the Paint Test Equipment Downloader installed. Connection is made using the USB Cable (download instructions are available on the Help file in the program). The batches downloaded can then be entered into Word or Excel.
	By Batch Number	Download single or multiple batches by batch number. By entering a zero batch, all batches will be downloaded.
	By Job Number	Download single or multiple batches by job number.

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Control

Check Bat Life	Battery life can be examined to determine the percentage of the battery life that is available. Low Battery will appear on the display when recharging is required. To charge the Stargloss, plug the charger into the circular hole on the side of the unit and allow to charge for approximately 12 hours.
Set Limits	Limits can be set to establish a High and also a Low pass / fail threshold. For out-of-limit readings an error display will be shown and the alarm will be sounded. The error amount will be shown as a percentage, which is the difference between the set High or Low limit and the particular reading. To remove Limits press Clear Entry instead of entering numbers when setting limits.
Set Date/Time	The date and time can be set. This will be recorded with every batch stored, and appear on all batches downloaded.
Eng Mode	This function is for Paint Test Equipment use only.
Install Name	The Stargloss can be personalised with your company, department or operator's name. This will appear on every download and on the instrument at switch on. By entering the following Ascii codes the name can be entered: A-65, B-66, C-67, D-68, E-69, F-70, G-71, H-72, I-73, J-74, K-75, L-76, M-77, N-78, O-79, P-80, Q-81, R-82, S-83, T-84, U-85, V-86, W-87, X-88, Y-89, Z-90. a-97, b-98, c-99, d-100, e-101, f-102, g-103, h-104, i-105, j-106, k-107, l-108, m-109, n-110, o-111, p-112, q-113, r-114, s-115, t-116, u-117, v-118, w-119, x-120, y-121, z-122. Space character-32. When Enter is pressed without a character input, then the display will exit to normal measurement mode.

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About us

Paint Test Equipment are manufacturers of a comprehensive range of specialist instruments for the Industrial Coatings and Finishings Industries and have been supplying instruments to customers worldwide for over 25 years.

During this time Paint Test Equipment have established a reputation for manufacturing quality instruments to the highest specification, to meet the demanding requirements of the Industrial Painting Industry.

Recalibration

Paint Test Equipment can service and recalibrate all applicable products that we supply.

We recommend that the equipment is returned on a 12-monthly basis to Paint Test Equipment for service and recalibration.

Calibration Certificates will have traceability to UKAS or BAM. The Certificate is supplied in a paper format and is available online through the Calibration Portal (under Browse Categories) on our website. The Calibration Portal will list all your equipment that is calibrated by Paint Test Equipment, showing the renewal dates and allowing Calibration Certificates to be viewed at any time.

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