haze-gard i

New!

The objective standard for a clear view

Transparent products can have a milky or fuzzy appearance dependent on its light scattering behaviour. The haze-gard i quantifies the visual perception with objective measurement criteria:

- Total transmittance
- Transmission haze
- Clarity

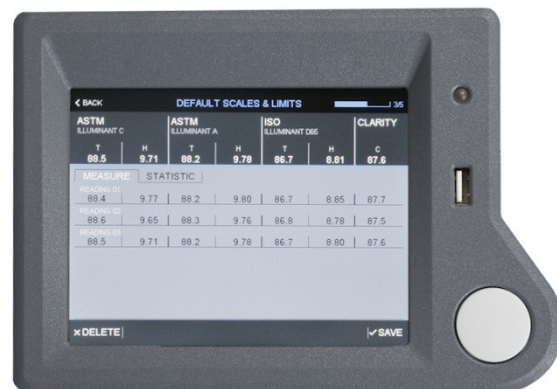haze-gard i controls complete transparency by taking only one reading.

Global communication

Haze and transmittance control according to international standard methods with one unit:

- ASTM D1003 - illuminants C and A Non-compensated method
- ISO 13468 - illuminant D65 Compensated method

haze-gard i displays all results simultaneously - well prepared for any customer specification.
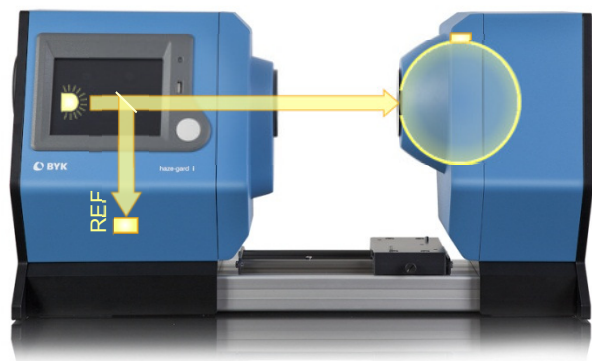

Reliable and Precise

With state-of-the-art optics and LED technology the haze-gard i delivers an unprecedented performance:

- Reference beam, self-diagnosis and enclosed optics.
- LED light source assures long-term stable results for many years: 10 year warranty on the lamp life !
- Automatic, long-term calibration - operator friendly and safe.

Superior repeatability and inter-instrument agreement are guaranteed.

Smart and Fast

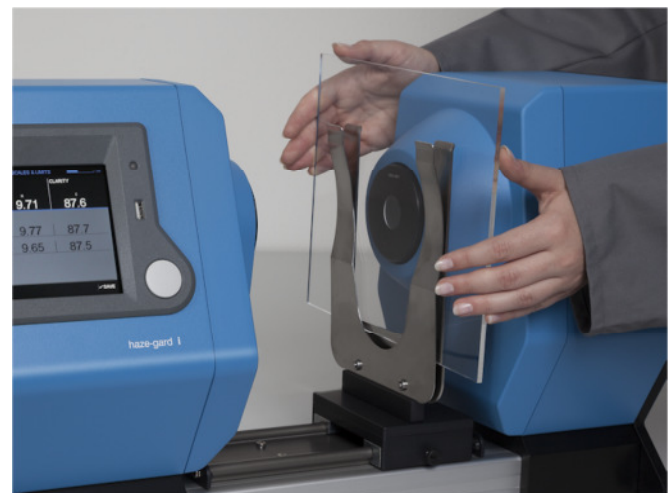The new touch display is designed to be intuitive and easy to use for any task:

- Large touch display in color.
- Symbols to select a menu function.
- Dedicated measurement button.
- Footswitch allows hands-free operation.

Open and Flexible

The open measurement compartment let's you work freely to analyze any sample size:

- Open design for small and large specimens.
- Fast change and positioning of samples.
- No influence of ambient light.
- Versatile sample holder for films and sheets.
- Sample holders for taber abrasion test and cuvettes for liquids optional.
- Customized sample holders can be easily attached.

Horizontal or vertical set-up

Sample handling in any position is convenient and allows you highest flexibility.

Onboard analysis

Measurement data can be analyzed and saved in projects directly in the haze-gard **i** for efficient work management:

- Large instrument memory (5000 readings).
- Complete statistics with averaging, min / max, standard deviation.
- Limit input for different product specifications with colorful Pass/Fail analysis.
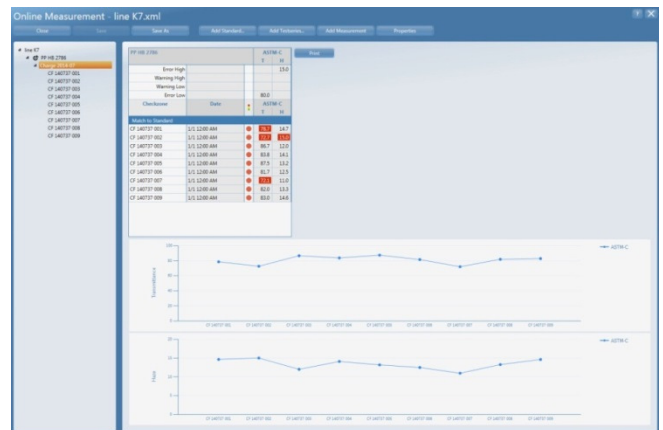

Professional connection

Data transfer can be performed in all sorts of ways to support you in routine lab work:

- Direct data transfer via USB-port to PC.
- Direct LAN connection to your network for further analysis in Laboratory Information Management Systems (LIMS).
- Save data on a USB-stick.

smart-lab haze - data analysis software

Whatever the task, smart-lab haze will do it for you. From simple data tables of single test series to trend reports over time - anything is possible.

- Define your product specifications in standard management by setting up product groups with Pass/Fail limits.
- Measure your products online and get instant QC reports displayed: Data table with statistic and line graph including Pass/Fail coloring.
- Manage your lab work in projects to show production process stability using trend reports.
- Transfer product specs and projects to haze-gard **i** and vice versa for daily work management.

In compliance with:

Standards

ASTM	D1003, D1044
ISO	13468, 14782

Ordering Information

Cat. No.	Description
4775	haze-gard **i**

Comes complete with:
Hazemeter with sample holder
Clarity calibration standard
Traceable certificate
Foot switch and power cord
USB-cable and LAN-cable
smart-lab haze software on CD with License Key (2 licenses)
Operating manual
Training

Extended Warranty: see pages about Technical Service
Free 1x preventive maintenance service during warranty period

Note: smart-chart licence fee for more than two installations is quantity dependent. Please contact your local BYK-Gardner representative.

System requirements:
Operating system: Windows 7 SP1 or 8.1
Microsoft® .NET Framework 4
Hardware: Core 2 Duo, 2.2 GHz, i7 recommendet, or equivalent
Memory: 4 GB RAM, 8 GB recommendet
Hard-disk capacity: min. 300 MB
Monitor resolution: 1280 x 1024 pixel or higher
Disk drive: CD-ROM or DVD drive
Interface: free USB-port or network access

Technical Specifications

Illuminants	CIE-C, CIE-A (ASTM D1003)
	CIE-D65 (ISO 13468, ISO 14782)
Spectral Response	CIE luminosity function y
Geometry	0° / diffuse
Measurement Area	ø 18 mm (0.7 in)
Sample Port	ø 25.4 mm (1.0 in)
Measurement Range	0 – 100 %
Repeatability	± 0.1 units (standard deviation)
Reproducibility	± 0.4 units (standard deviation)
Memory	5000 readings
Interface	LAN, USB 2.0, additional front USB-port for memory stick
Power Supply	115/230V self adapting
Operating Temperature	+10 to 40 °C (+50 to 104 °F)
Storage Temperature	0 to 50 °C (+32 to 122 °F)
Dimensions	62 x 33 x 22 cm (24 x 13 x 9 in)
Weight	18 kg (40 lbs)

Training

BYK-Gardner offers you more than just an instrument. We train you in the operation of the haze-gard **i** and data analysis. A half-day training course for haze-gard **i** operation and smart-lab haze software is included.

Versatile sample holders for specific needs

Easy replacement of holders for different applications.

Special holder for very thin films

Ordering Information

Cat. No.	Description	
4784	Thin Film Holder, for 4775	Special holder for very thin films
4785	Taber Abrasion Holder, for 4775	For evaluation of abrasion resistance with the hazemeter
4786	Cuvette Table, for 4775	For measurement of liquids
6180	Cuvette for Liquids, 2.5 mm	Path length 2.5 mm, edge length 50 mm
6182	Cuvette for Liquids, 5 mm	Path length 5 mm, edge length 50 mm
6183	Cuvette for Liquids, 10 mm	Path length 10 mm, edge length 50 mm
6189	Cuvette for Liquids, 20 mm	Path length 20 mm, edge length 50 mm
4865	BYKWARE smart-lab haze	Software for professional analysis and documentation

Accessories

The measurement of haze is used to determine abrasion resistance of transparent materials. The haze-gard **i** Abrasion Holder facilitates positioning of the abraded area in the measurement beam.

Liquids are best measured using cuvettes and the cuvette table.

Certified

Please refer to section
Preventive Maintenance

Ordering Information

Cat. No.	Description
4776	Clarity Calibration Standard, for 4775
4777	Clarity Reference Standard, for 4775
4790	Haze Standard 1, for 4775
4791	Haze Standard 5, for 4775
4792	Haze Standard 10, for 4775
4793	Haze Standard 20, for 4775
4794	Haze Standard 30, for 4775
4795	Haze Standard Set, for 4775
4778	Transmittance Standard 10, for 4775
4779	Transmittance Standard 30, for 4775
4780	Transmittance Standard 50, for 4775
4781	Transmittance Standard 70, for 4775
4782	Transmittance Standard 90, for 4775
4783	Transmittance Standard Set, for 4775

Accessories

Description
Replacement Standard for clarity, certificate included
Test standard for checking purposes, certificate included
Approx. 1% haze, for checking purposes, certificate included
Approx. 5% haze, for checking purposes, certificate included
Approx. 10% haze, for checking purposes, certificate included
Approx. 20% haze, for checking purposes, certificate included
Approx. 30% haze, for checking purposes, certificate included
Set of 5 pieces in hard box, certificate included
Approx. 10% total transmittance, for checking purposes, certificate included
Approx. 30% total transmittance, for checking purposes, certificate included
Approx. 50% total transmittance, for checking purposes, certificate included
Approx. 70% total transmittance, for checking purposes, certificate included
Approx. 90% total transmittance, for checking purposes, certificate included
Set of 5 pieces in hard box, certificate included