Brabender Viscograph-E

	↓
Measuring principle	Torque viscometer
Sample volume (approx.)	Starch: 450 mL / flour 530 mL
Temperature range	30 °C to 98 °C
Heating/cooling rate	- Standard: 1.5°C - Adjustable 0.1 °C/min to 3.0 °C/min - For special applications up to 4.0 °C/min
Speed	0 min^{-1} to 300 min^{-1}
Dimensions (W x H x D)	560 mm x 890 mm x 430 mm
Weight (approx.)	30 kg
Power supply	- 1 x 230 V; 50/60 Hz + N + PE; 2.8 A - 1 x 115 V; 50/60 Hz + PE; 5.6 A
Interfaces	USB 2.0
Computer requirements	- Windows 10 (64-Bit) - HTML5 web browser - Intel® Pentium™ N4200 - 4 GB DDR - 20 GB SSD - USB 2.0 Port
Accessories	- Thermostat: refrigerated / heating circulators CD200F - Precision scale: 0.1 g to 1000 g
Standards	- ICC 169 - AACCI 61-01.01

Reliable.
Compliant.
Qualified.

Our well-trained and certified technicians are ready to keep your instrument running smoothly.

Maximum uptime | **Warranty program** | **Short response times** | **A global service network**

Standard
Starch
Viscometer

Brabender: Viscograph-E

Brabender
A brand of **Anton Paar**

Brabender®

A brand of **Anton Paar**

Accurate, Long-Lasting, and Globally **Compliant**

When you choose the Viscograph-E, you're choosing an instrument from a company with more than 80 years of experience in starch measurement technology. The Viscograph-E has been so well accepted in the starch industry that it's helped streamline and standardize it.

Global compliance, guaranteed
With its ability to test gelatinization properties of starch and conform to various ICC and AACCI standards, the Viscograph-E guarantees seamless global value chain compliance, ensuring that your products meet specified criteria. Your starch quality is described in a globally established language: Brabender Units (BU).

Accurate and long-lasting
With just a 40 g starch sample size, the Viscograph-E reduces the impact of weighing errors and improves sample homogeneity. Its stainless steel beaker and stirrer increase measurement accuracy, and both reduce repeat orders compared to disposable systems. You can check your device yourself to see if it is working properly or needs calibration.

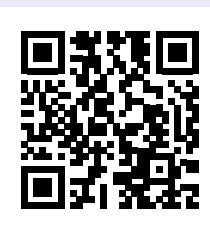**Precision through real-time temperature monitoring**
Since a temperature probe is in direct contact with the sample, the Viscograph-E offers real sample temperature measurement capabilities, which eliminates fluctuations and ensures highly precise results that mirror real-life production conditions.

Reliable Data, **Guaranteed**

Get reliable and reproducible data about the rheological properties of all kinds of native and modified starch as well as starch-containing products. Investigate gelatinization and gelification properties, hot and cold viscosity, thick or thin boiling, stability of thickening agents or binders, acid stability, and extrudate testing.

A

Beginning of gelatinization
Swelling of the starch granules caused by accumulating water leads to increasing viscosity. Time from the beginning of the test until the first sign that the curve is dropping off.

B

Maximum hot viscosity
The water accumulation reaches its maximum and the starch granules begin to burst at the first maximum viscosity. Highest point of the curve during heating/holding.

C

Minimum cold viscosity
The starch is gelatinized as a gel or paste and the amylase and amylopectin molecules are completely separated in the minimum viscosity. This is the lowest point in the curve.

D

Maximum cold viscosity
A 3D crystal structure is formed by the amylase and amylopectin molecules which leads to a second viscosity maximum in the cold phase. Viscosity at the end of the test.
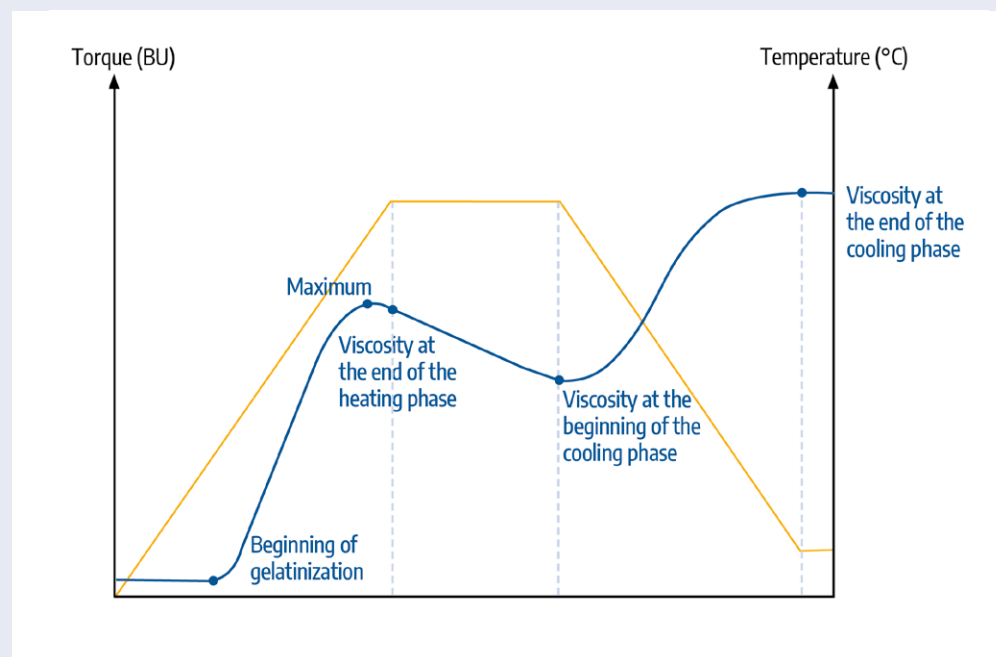
E

Breakdown
Calculated parameter (B-2). Maximum hot viscosity – Viscosity at start of cooling phase = breakdown.

F

Setback
Calculated parameter (3-2). Viscosity at the end of cooling period – Viscosity at start of cooling phase = setback

Torque (BU) — Temperature (°C)

Maximum
Viscosity at the end of the heating phase
Viscosity at the beginning of the cooling phase
Viscosity at the end of the cooling phase
Beginning of gelatinization

Optimize Your Workflow **with MetaBridge**

Easy-to-use software for everyday laboratory work with the Viscograph-E

Optimized workflows
→ These use many well-known ICC and AACCI standards
→ Our guided workflows avoid common errors in advance to ensure a smooth process in the laboratory
→ You're flexible and can customize the predefined methods and evaluations. This doubles the heating and cooling rates and saves 35 % on your measuring time

MetaBridge Connect
→ Easy access to your measurement data via a web browser within the company network
→ MetaBridge devices exchange information to optimize your work in the laboratory, letting you automatically exchange sample names and other parameters

Data sharing
→ Standard data exports in typical formats such as Excel, CSV, PDF
→ Built-in mailing function for a quick exchange with colleagues and customers

→ Support of third-party systems (e.g., LIMS, ERP) via Brabender WebAPI, shared network folders, or OPC UA

Reference comparison and correlation
→ The Reference Curve feature lets you monitor material quality in real time and receive automatic feedback on whether or not specifications have been met
→ Compare a multitude of measurements with the Correlations add-on feature to obtain an optimal understanding of your materials

EvaluationEditor
→ This add-on feature enables you to create your own evaluations and perform them automatically after your measurement
→ Additional evaluation points can give you a deeper analytical understanding of your measurements