



ICC-Standard No. 115/1
AACC Method No. 54-21.02
AACC Method No. 38-20.01
ISO 5530-1

Farinograph®-TS

User-friendly flour quality testing
standardized worldwide



... where quality is measured.

Farinograph-TS



Benefit from our long experience in the field of flour testing and use the advantages of the Brabender Farinograph. Easy handling, reliability, and the objectivity, and reproducibility of the results have made it the instrument most frequently used all over the world for determining the water absorption and mixing characteristics of wheat and rye flour.

Advantages of the Farinograph-TS

- Compact housing with low space requirements
- Plug & Play: ready to use
- Modular design, touch screen optionally available
- Browser-based MetaBridge software with several features for high usability and precise measuring results
- Multi access: Tracking of tests through multiple end devices at a time

Application

The instrument consists of a drive unit with continuous speed control and an attached measuring mixer for mixing the dough to be tested.

Reliable and reproducible determination of the flour quality and its processing characteristics is a basic demand in the milling and baking industries for ensuring optimum and uniform flour qualities for the manifold baking and noodle products.

The Farinogram

The Farinogram shows the quality characteristics of the analyzed flour.

Water absorption:

The more water a flour can absorb at a definite consistency of a dough, the greater the dough yield per sack of flour.

- Higher flour price due to optimal water absorption
- Time saving in production due to constant water absorption

Dough development time:

Optimum mixing time for optimum doughs.

- Most efficient mixing time and settings
- Assurance of stable product quality by identifying different particle sizes or starch damage

Stability:

The longer the stability, the greater the fermentation tolerance and the higher the forces required for mixing.

- Determination of the most profitable application with information on the properties of the gluten contained in the dough

Degree of softening:

The sooner the weakening, the shorter the fermentation and the less the abuse the flour can withstand.

Farinograph Quality Number (FQZ):

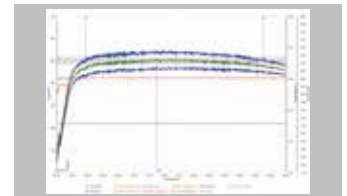
The higher the FQZ, the stronger the flour.

Individual test procedures

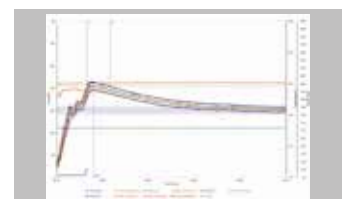
Apart from the standard evaluation, the software allows to adapt the test procedure to your individual requirements:

- Reduced test time and/or increased mixing intensity by variable speed (0 - 200 min⁻¹)
- Variable mixing intensity and energy input to the dough for research and development applications
- Additional software for programming complex speed profiles, e.g. premixing at a low speed and kneading at an increased speed or definition of rest times for long dough systems

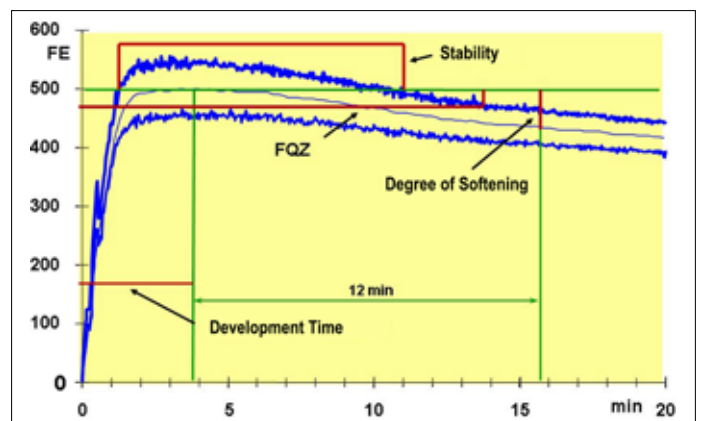
- Evaluation of diagrams which differ from the typical Farinogram profile



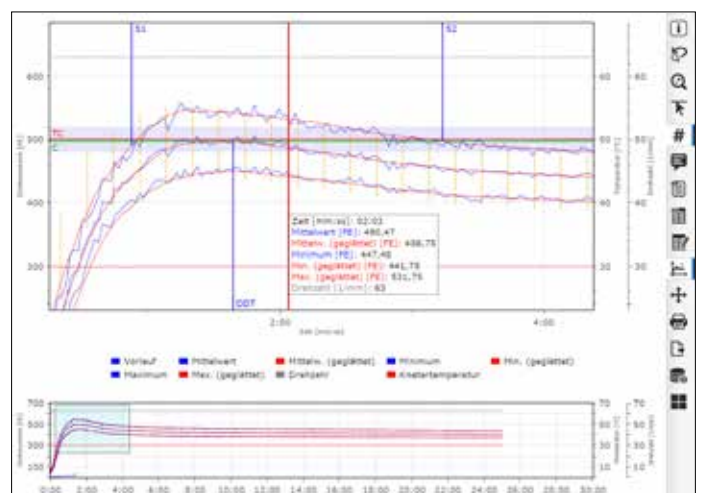
Wholemeal flour



Rye flour



Schematic diagram



Farinogram, visualized in the Brabender MetaBridge

The Brabender MetaBridge



Discover the Brabender MetaBridge

The browser-based software is characterized by its easy and intuitive handling. After log-in, the user finds all information about the device and a choice of options for his purpose on the start screen.

Measurement, evaluation and administration functions

Benefit from new and optimized functions:

- Administration mode for user access rights
- Central test administration
- Live tracking of tests with end time indication
- Record, evaluate, print and



By a mouse click or touch, the user can choose one of the tiles that are easily distinguished by color.

export test results

- Interactive editing of measuring data
- Automatic measuring data storage mode

Advantages

- User-friendly operation by touch
- Test tracking independently from end device and location
- Responsive web design: automatically adjusted screen resolution
- Ready to use, no installation necessary
- Access through easy user log-in
- Touch support for tablets and smartphones
- Test tracking from multiple end devices at a time
- Security of tests and data: protection from unauthorized access
- Automatic note when new software updates are available, provided the instrument has internet access



The MetaBridge enables the operation of the Farinograph from a tablet or smartphone. Track your test results from your lab, your home office or on the go.

Aqua-Inject

Maximum precision

Water dosing with automatic titration curve

Absolutely no need to use a glass burette - the Aqua-Inject automates the process of water dosing when used with the Farinograph-TS in combination with MetaBridge software. Water quantities and dosages can be preset and application errors minimized. The system independently dispenses doses of water at intervals until the desired consistency is achieved.

A volumetric rotary turbine measures the quantity of water (0.3 ml to 2,000 ml) based on the continuous flow principle and achieves a degree of accuracy of ± 0.25 ml for the 300 g mixer.

The integrated heating unit keeps the water temperature constant and renders additional thermostats unnecessary. An external cooling thermostat is only required for applications below room temperature.

Benefits of Use

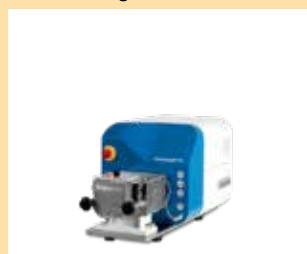
- Automatically generated titration curve saves time
- No need to use glass burettes
- Simple operation, increased safety, minimizes application errors
- Increased water quantity accuracy
- Standardized procedure
- Increased reproducibility of results
- Rapid amortization of investment costs
- Web-based documentation of operational quality assurance



Configuration possibilities for the Farinograph-TS

Configure your ideal Farino from the basic version to the comfort version

Screen configuration



Farinograph-TS without touch screen



Farinograph-TS with touch screen

Water dosing system configuration



Farinograph-TS with burette



Farinograph-TS with Aqua-Inject

Farinograph-TS

Calibration Kit

Check measurements with reference material

Avoid complaints, unnecessary rejects and loss of reputation. Frequent check measurements with Brabender reference material ensure reliable measuring data. Our specially prepared calibration flour in combination with the reference curve offers you a direct comparison of your measuring data with the nominal measurement values.

Order your Calibration Kit by phone or e-mail:

Tel.: +49 203 7788-131
service@brabender.com

Application

Prepare the test according to the instructions and compare the values with the provided reference curve of the master device. If the values are within the tolerance limit, you can rely on the values of your device as well as on your application. If the values exceed the tolerance limit despite numerous checks, together we will identify the cause and find a solution for it.



SAMPLE



ANALYZE



COMPARE



CHECK

3-Phase-System

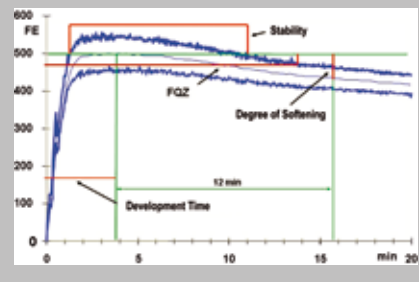
Part of the 3-Phase-System

The Brabender 3-Phase-System simulates the production of bakery products on a laboratory scale – integrated and practice-oriented:

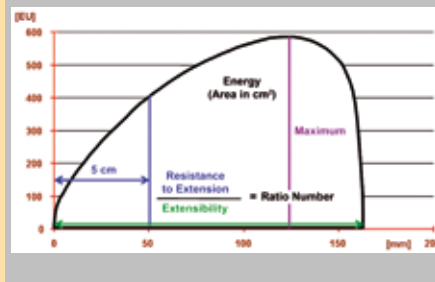
- Phase 1 – Farinograph gives information about the flour water absorption and the mixing characteristics of dough
- Phase 2 – Extensograph determines the stretching properties of dough
- Phase 3 – Amylograph measures the gelatinization properties of starch and the enzyme activity in flour

Advantages

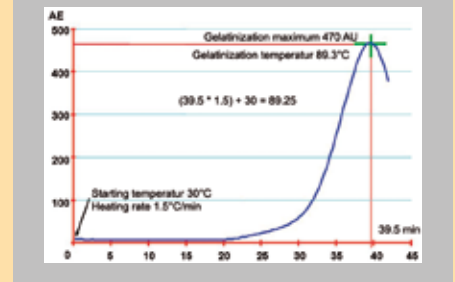
- Practice-oriented methods to characterize your flour
- Methods standardized worldwide
- Cost optimization for raw material supply and production
- Quality control for high quality products



Farinogram



Extensogram



Amylogram

Standard mixing tool for the Farinograph-TS:



Measuring Mixer S 300: Slim design and low overall weight for enhanced usability

Measuring Mixer S 300

- For standard Farinograph test (300 g of flour) according to ICC, AACC, ISO
- For mixing the dough for Extensograph tests
- Removable blades

Other tools supported:
Measuring Mixers S50 and S10,
FarinoAdd-S300 (upgrade kit for gluten-free flours)

Further Methods

- AACC method No. 54-22.01
- AACC method No. 54-28.02
- AACC method No. 54-29.01

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Farinograph-TS

Max. Torque	20 Nm
Speed / Speed profiles	0 - 200 min ⁻¹
Mains connection	1 x 230 V; 50/60 Hz + N + PE; 5,2 A 1 x 115 V; 50/60 Hz + PE; 10,4 A
Interfaces	1x ethernet connection; WiFi 1x HDMI connection 4x USB connections
Dimensions (W x H x D)	420 x 553 x 700 mm (without touch screen) 470 x 553 x 700 mm (with touch screen)
Weight	approx. 45 kg net approx. 63 kg net including Mixer S 300
Aqua-Inject	approx. 12 kg net