




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

## Farinograph®-E

Worldwide standard for testing  
flour quality



**SOFTWARE  
UPGRADE**



**New software - now available**  
Track your measurements from anywhere  
and anytime with the MetaBridge Controller.  
As well as automatic water dosing and  
titration by using the Aqua-Inject.



... where quality is measured.



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.

### 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<sup>-1</sup>)
- Mixing intensity and energy input to the dough are variable adjustable for research and development applications
- Additional software for programming complex speed profiles, e.g. premixing at a low speed and measurement at an increased speed or definition of rest times for long dough systems
- Evaluation of diagrams which differ from the typical Farinogram profile

## Farinograph-E

### 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.

### Advantages

- Extended software applications
- Variable speed (0 - 200 min<sup>-1</sup>)

### Additional software

- Programming of speed profiles
- Creating of individual test profiles
- Free definition of own evaluation methods
- Integrated videos show test procedures
- Auto save mode
- Reference curve could be integrated

### Manifold applications

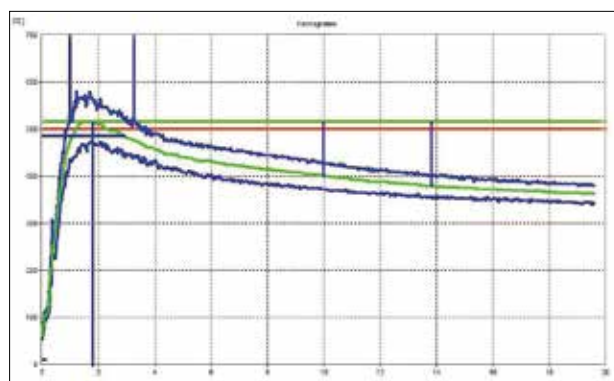
- Measure the water absorption of flours
- Determine the rheological properties of the dough
- Check production and flour blends in the mill
- Test rye flour, biscuit batters, egg foam, etc.
- Special applications, e.g. for chocolate, chewing gum, fish, cheese, meat, etc.

### Principle

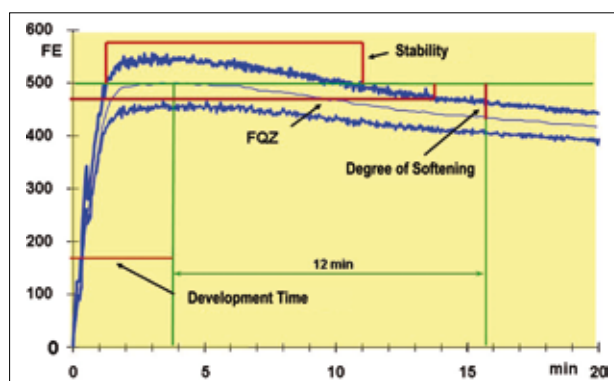
Fill your flour/water suspension into the heated measuring mixer where it is subjected to a defined mechanical stress by the rotating mixer blades which are driven by a motor, carried in a pendulum bearing.

The resistance of the dough against the blades, which depends on the viscosity of the dough, causes an opposite deflection of the motor housing. This deflection is measured as torque and recorded and plotted on-line as a function of time in a clear color diagram.

### The Farinogram



Farinogram



Schematic diagram

Get reliable and reproducible data about the quality characteristics of your flour from the Farinogram which shows

- Water absorption
- Stability
- Farinograph quality number
- Development time
- Degree of softening

## Mixing tools for the Farinograph-E



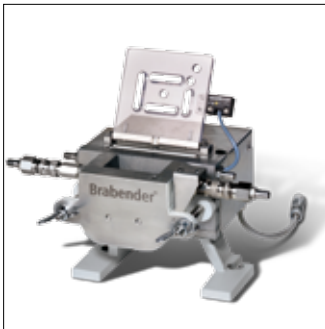
### Sigma mixer S 300

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



### Hardness and Structure Tester

- For testing the hardness of grain (wheat, barley, malt, etc.)
- Special software



### Sigma mixer S 50

- For standard Farinograph test (50 g of flour) according to ICC, AACC, ISO
- Removable blades



### Sigma mixer S 10

- For standard Farinograph test with small sample weights (10 g)
- For breeders and research work



### Planetary mixer P 600

- For rye dough and sponge batter
- With dough hook, K-hook, whisk

Further special mixers on request

## Brabender 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.

Also for other Brabender instruments available.

Learn more: <https://goo.gl/zN7nNa>

### 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

Order your Calibration Kit by phone or e-mail:

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



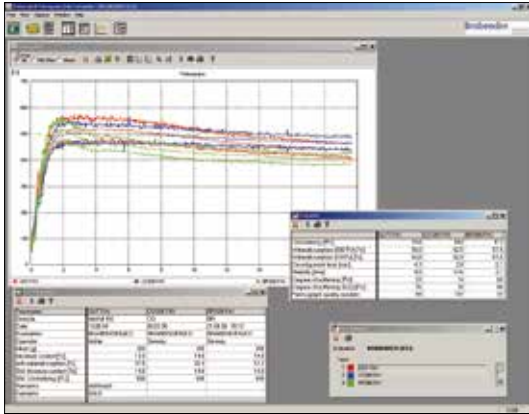
... where quality is measured.

# Farinograph-E

## Data correlation

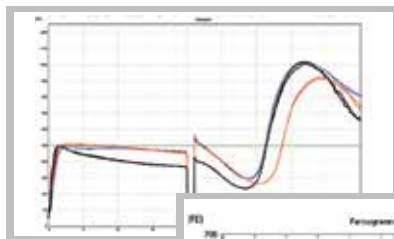
Use the powerful Farinograph correlation program to compare diagrams and results of up to 10 tests with each other. Test conditions and results are contrasted in tables and evaluated statistically.

You can quickly assess trends or irregularities by drawing and printing all diagrams of the correlation together in a single plot.

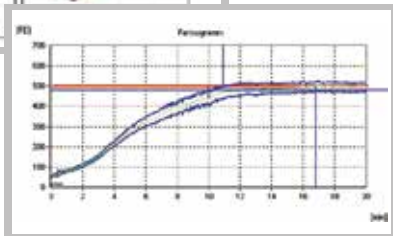


Data correlation

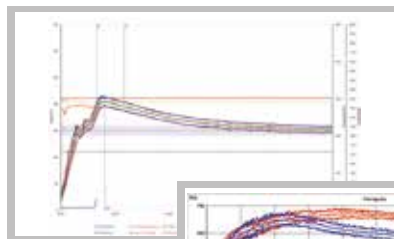
## Individual test procedures



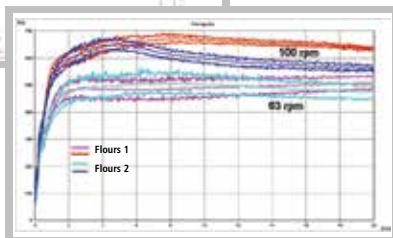
Heating of doughs



Wholemeal flour



Rye flour



Two flours – different speeds



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## Further Methods

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

## 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-E in combination with the MetaBridge Controller and its associated 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  $\pm 0.25$  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



Farinograph-E	
Max. Torque	20 Nm
Speed / Speed profiles	0 - 200 min <sup>-1</sup>
Mains connection	1x 230 V; 50/60 Hz + N + PE; 3.2 A 115 V; 50/60 Hz + PE; 6.5 A
Dimensions (W x H x D)	510 x 370 x 820 mm
Weight	approx. 75 kg net



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