

NEWS

Brabender® TwinLab-C 20/40 Compounding on a laboratory scale



What is this instrument for?

With the TwinLab-C 20/40, Brabender offers a stand-alone twin screw extruder as miniature scale, especially designed for applications in a laboratory. It is used for product and recipe development, feasibility studies in the context of process developments, material development, analysis of the process-dependent material behavior or developments in recycling.

Furthermore, it can be applied for raw material quality control, laboratory-scale production (e.g. sampling for customers) and compound preparation of test samples for mechanical or dynamic testing as well as for film cleanliness testing.

New compounds with or without additives or fillers, e.g. from thermoplastics, technical plastics, thermoplastic elastomers, ceramic materials or metal oxides, can be tested and developed on a laboratory scale.

What does this instrument measure?

- Material temperature and pressure
- Load / Torque
- Viscosity (optional)
- Residence time

Why is this important?

The measured values can be used to infer the relationship between extruder settings, process conditions and product properties. Due to the low throughput rates and the compact design of the machine, changes to extruder settings can be effected more quickly.

In general, the application of a laboratory extruder enables the development of new products, recipes and processes without impacting the ongoing production. Only a small amount of raw material is required for this kind of laboratory-scale process simulation. This is particularly advantageous when expensive or poorly available material has to be tested. Likewise, only small amounts of product have to be disposed of.

Features of the Brabender TwinLab-C 20/40:

- User-friendly touch screen control
- Integrated frequency inverter controlled motor (either 600 or 1200 rpm)
- 4 top ports and 2 side ports for dosing raw material and liquid
- Atmospheric and vacuum degassing at top ports
- Tests can be run with different L/D ratios (openings can be equipped with dosing systems, thermocouples, pressure transducers, liquid/gas pumps or a vacuum pump)
- Horizontally splitted liner can be opened to observe the process, as well as for easy cleaning.
- 4 electric heating zones; water cooling with chiller
- Large program of die heads and modular screws available for different applications
- Support stand and support frame for different dosing systems (optional)

Special feature – Web-based Brabender MetaBridge Software:

- Ready to use: no installation necessary
- User-friendly interface
- Accessible by multiple users from different locations
- Compatible with different types of end devices
- Updatable on-line
- Integrated correlation software for comparing measuring results

What are the benefits?

- Learn more about new processes
- Vary your application ideas in terms of raw materials, composition, machine or product
- Use significantly less material to carry out your trials
- Minimize product waste
- Establish methods for measuring your quality from raw material to end product in advance



Brabender®