

# Brabender MetaStation

The new Generation of flexible  
and versatile Drive Units



**Brabender®**  
... where quality is measured.

# Brabender MetaStation 4 / 8 / 16

The new generation of modular drive units for measuring mixers and extruders. Analyze polymers, ceramic- or highly filled compounds for processing/plasticizing behavior, such as heat and shear stability, plasticizer absorption, melting behavior etc.

The modern torque rheometers combine compactness with maximum flexibility: the drives cover an outstandingly wide range of applications, precisely fitting for a laboratory table. A floor standing model is available for applications that require higher torque and speed. The newly developed drive units have a modular design, allowing to connect larger mixers and extruders via a docking station or on the mixer support plate.

Maximum scalability opens up the extensive range of compatible measuring heads, die heads and mixers.

## Fields of application

- Material testing
- Raw material and recipe development
- Quality control parallel to production
- Optimization of the production process
- Laboratory-scale production of samples for further investigations



## Highlights

### Modular Design

- Flexible and versatile
- Larger range of attachments
- Detachable mounting plate

### Flexible

- Wide range of applications (single/double screw extruder, measuring mixers)
- Wide range of standard die heads and customizable options to for your application

### Increased power

- Increase of maximum speed and power to have more flexibility in devices and processes

### Easy handling

- Ready to use: Integrated MetaBridge HMI, touch screen and interface to native or 3rd party LIMS or ERP systems
- Direct control of downstream equipment

### Compact

- Small footprint
- Available as table-top version, with a rack or floor-stand version



# Accessories and Attachments



## Measuring Mixers

Suitable for sample preparation and rheological testing of:

- Thermoplastic polymers (everything from PVC to biopolymers, algae, PLA, PEEK)
- Elastomers
- Thermosets
- Ceramic pastes
- Battery compounds
- Application Energy Storage

To ensure the versatility and cover the most of the applications:

- 3 different sizes: 30-, 50-, 350 ccm
- 5 different blades: roller, cam, Banbury, sigma, delta
- and several different alloys of construction



## Measuring Extruders and Downstream Equipment

Designed for laboratory sized extrusion tasks of:

- Thermoplastic polymers
- Elastomers
- Ceramic pastes
- Battery compounds
- Food (see our separate brochure)

Available extruders:

- Single screw extruder modules in 19- and 30mm screw diameter
- Twin-screw extruder modules in 12- and 20mm screw diameter
- Conical-twin screw extruder module especially for PVC applications

Dies and follow-up units:

- Round die heads for compounding/pelletizing and 3 D filament applications: complete with pelletizer or winder
- Flat-film/ribbon dies up to 150 mm width: complete with conveyor belt or Univex flat-film take off unit, film quality analyzer
- Blown-film dies: complete with take-off tower, film quality analyzer
- Tubing die heads: complete with conveyor belt or winder
- Garvey die for rubber applications
- Capillary and slot capillary dies for rheological tests
- Wire coating die head, Filtratecst, Swell test

(Non-standard sizes and geometries upon request available)



## Suitable Configurations for MetaStation 4

Internal Mixer 350

Measuring Mixer 30/50

Planetary Mixer P 600

Conical Twin-Screw-Extruder

Single-Screw-Extruder 19

Twin-Screw-Extruder B-TSE-A 12/36

MetaStation 4

Further processing modules on request

## Suitable Configurations for MetaStation 8 / 16

Internal Mixer 350

Measuring Mixer 30/50

Planetary Mixer P 600

Twin-Screw-Extruder B-TSE-A 20/40

Conical Twin-Screw-Extruder

Single-Screw-Extruder 19

Twin-Screw-Extruder B-TSE-A 12/36

Twin-Screw-Extruder TSC 42/6

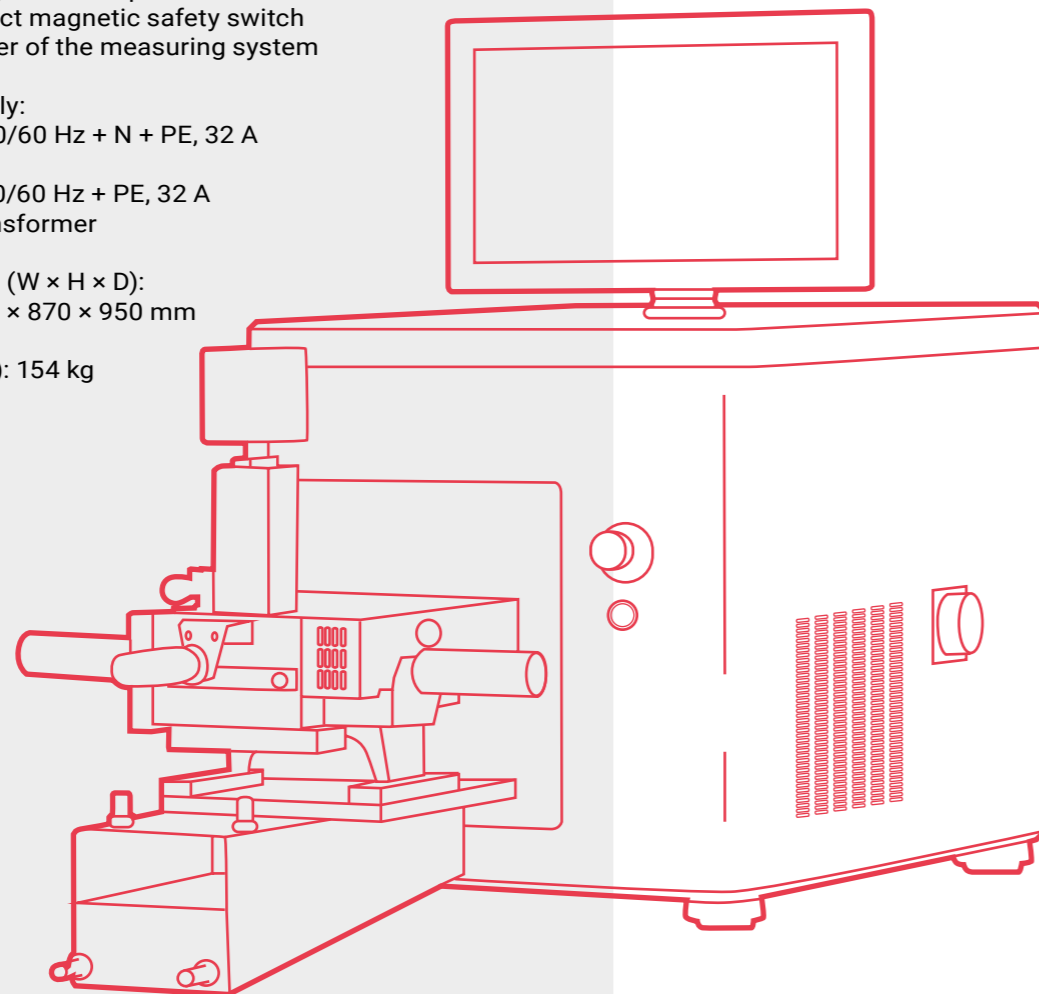
MetaStation 8 / 16

Further processing modules on request

# Technical Data

## MetaStation 4

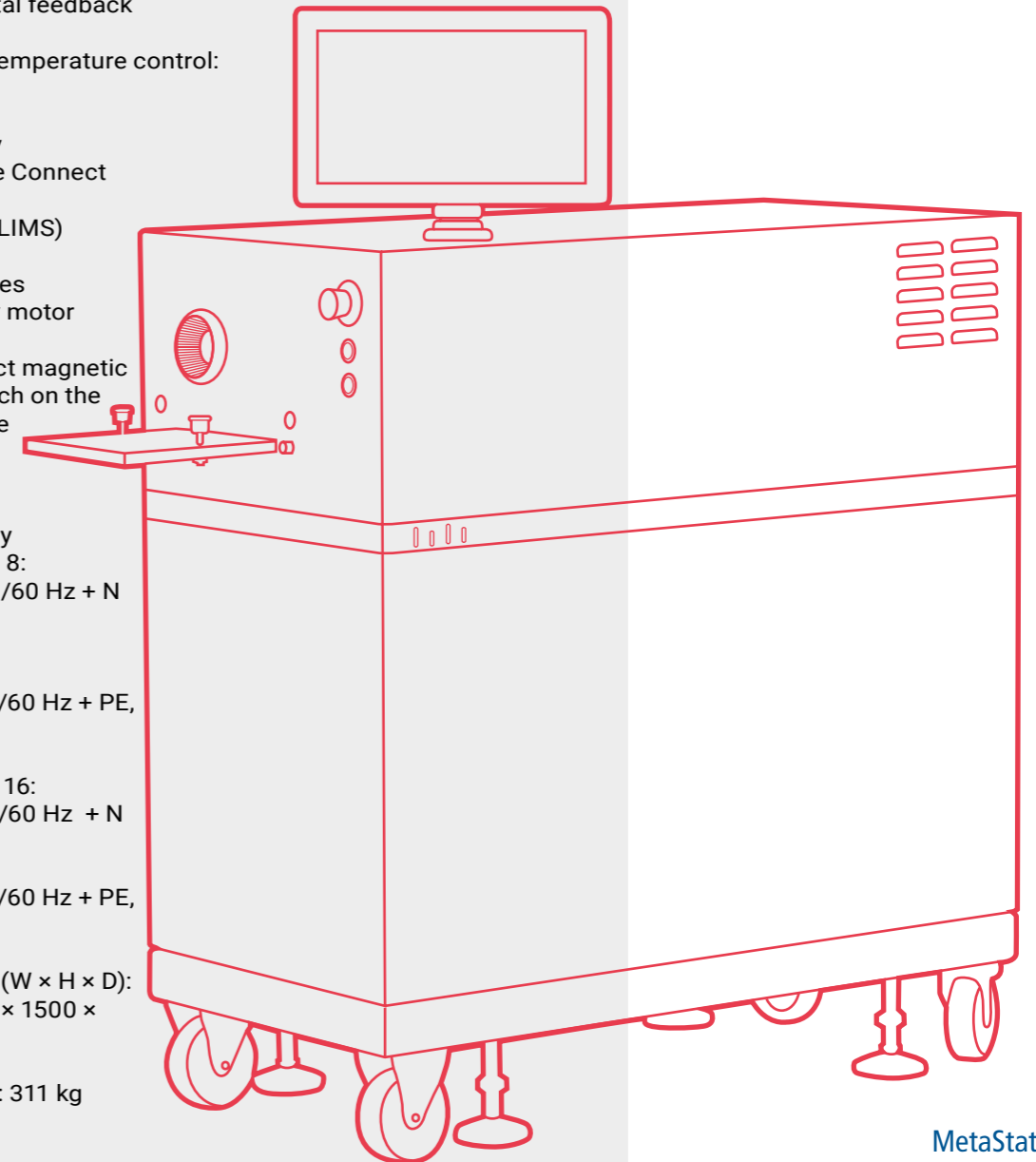
- Drive output: 4.2 kW
- Torque: 200 Nm
- Speed: 0.2 to 185 rpm continuously adjustable
- Speed deviation: 0.2 % through digital feedback
- Integrated temperature control: 6 zones
- Connectivity:
  - MetaBridge Connect
  - WebAPI (generic 3rd party data interface)
  - Labfolder (LIMS)
- Safety devices:
  - Emergency motor stop button
  - Non-contact magnetic safety switch on the cover of the measuring system
- Power supply:
  - 3 × 400 V 50/60 Hz + N + PE, 32 A
  - optional: 3 × 220 V 50/60 Hz + PE, 32 A without transformer
- Dimensions (W × H × D): approx. 700 × 870 × 950 mm
- Weight (net): 154 kg



# Technical Data

## MetaStation 8 / 16

- Drive output: 8 kW / 16 kW
- Torque and Speed
  - Metastation 8
    - 0.2 to 200 min<sup>-1</sup>, 400Nm, continuously adjustable
  - Metastation 16
    - 0.2 to 400 min<sup>-1</sup>, 400 Nm, continuously adjustable
    - 0.2 to 275 min<sup>-1</sup>, 500 Nm, continuously adjustable
- Speed deviation: 0.2 % through digital feedback
- Integrated Temperature control: 8 zones
- Connectivity
  - MetaBridge Connect
  - WebAPI
  - Labfolder (LIMS)
- Safety devices
  - Emergency motor stop button
  - Non-contact magnetic safety switch on the cover of the measuring system
- Power supply
  - MetaStation 8: 3 × 400 V 50/60 Hz + N + PE, 63A
  - optional: 3 × 230 V 50/60 Hz + PE, 72 A
  - MetaStation 16: 3 × 400 V 50/60 Hz + N + PE, 63 A
  - optional: 3 × 220 V 50/60 Hz + PE, 72 A
- Dimensions (W × H × D): approx. 600 × 1500 × 1370 mm
- Weight (net): 311 kg



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