

The new Generation of flexible and versatile Drive Units

Brabender: MetaStation



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, Filtratest, 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

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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

Single-Screw-Extruder 30

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

Twin-Screw-Extruder TSC 42/6

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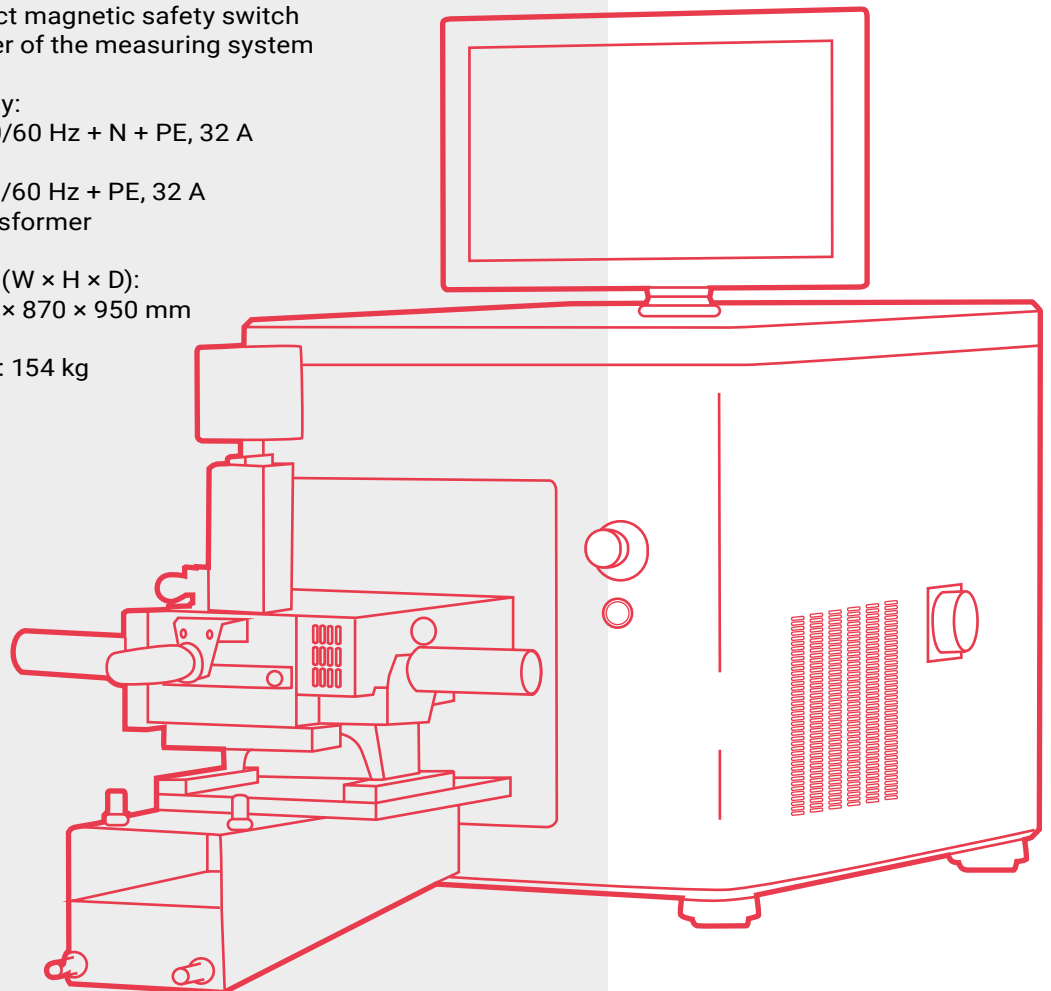
MetaStation 8 / 16

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 (E) / 16

- Drive output: 8 kW / 16 kW
- Torque and Speed
 - Metastation 8
 - 0.2 to 200 min⁻¹, 400Nm, continuously adjustable
 - Metastation 16
 - 0.2 to 400 min⁻¹, 400 Nm, continuously adjustable
 - 0.2 to 275 min⁻¹, 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

