

No.521 Semi Automatic Melt Indexer Model 4A

The Semi Auto Melt Indexer is designed for measuring of Melt Flow Rate (MFR) and Melt Volume Rate (MVR) conforms to ISO 1133 and ASTM D1238 with semi-automated functions such as assisted weight lifting, residue purging and assisted cleaning to ease the user's burden during operation.



Features

- Equipped with an automated measurement unit, a series of operations from the start of measurement after sample loading to the end of measurement are performed automatically.
- Automatic mechanism of loading test weight and residue emptying reduce operator burden and ensure operation safety, and shortening work time.
- Preheating conditions (preheating time, piston holding position, and holding time) can be set arbitrarily to maintain a constant actual preheating time until measurement starts, enabling stable measurement.
- The furnace cylinder cleaning unit enables one-touch cleaning of the furnace body by setting gauze.

Balance for method A automation (Optional)

- The mass of the cut extrudate filament is sent to the main unit with a single touch, and the MFR is automatically calculated.



Touch screen

- Enables setting of measurement conditions and viewing of measurement results.
- Capable of saving 100 measurement conditions and results each.

Lower safety door (Optional)

- Optional units in the lower part of the barrel do not operate when the door is open.

Automatic cutting device (Optional)

- Automatically cuts the extrudate filament under any conditions. Requires optional lower safety door.



Die plug (Optional)

- Used to prevent sample spillage during preheating.



Extrudate filament automatic collection device (Optional)

- Up to 3 filaments cut by the optional automatic cutting device are automatically collected. Requires optional safety door.



Preheating

Piston holding

Orifice die cleaning
Piston cleaning
Barrel cleaning

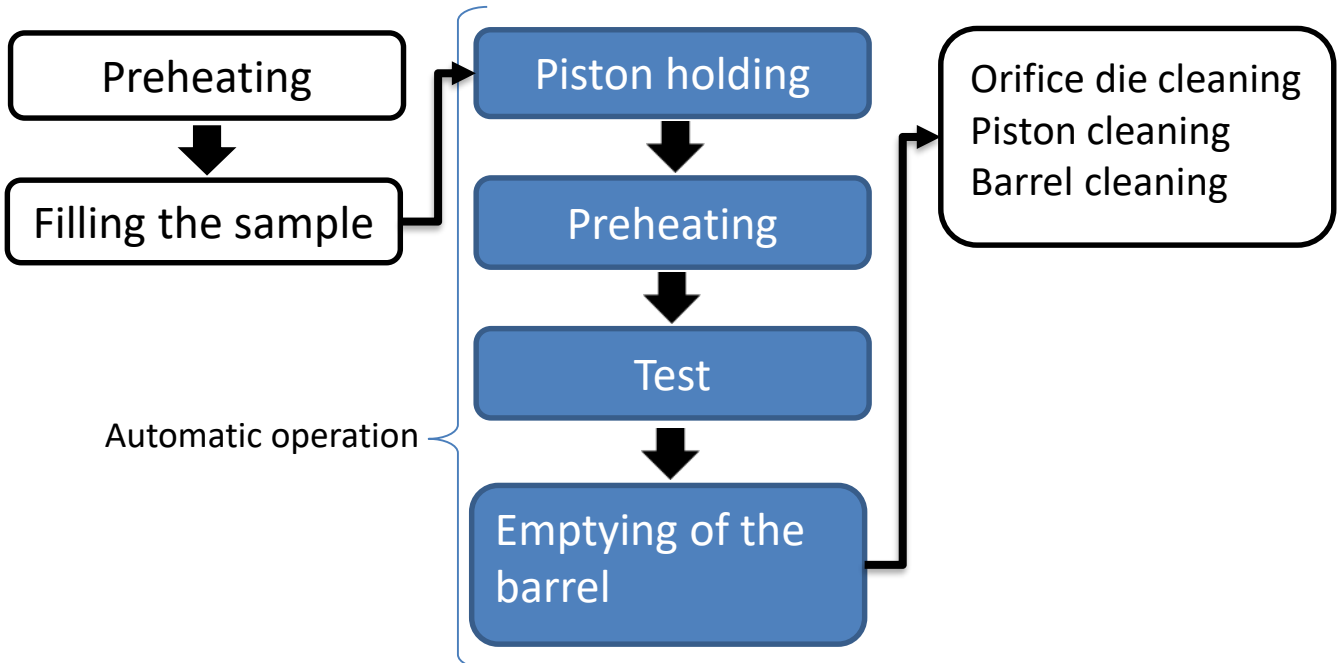
Filling the sample

Preheating

Test

Automatic operation

Emptying of the barrel



Specifications

| Model | 4A |
|----------------------|---|
| Test temperature | max. 350°C (400 °C optional) |
| Test loads | <ul style="list-style-type: none"> ● Standard: 0.325, 2.16, 5.0kg ● Optional: 1.0, 1.05, 1.2, 3.8, 10.0, 12.5, 21.6kg |
| Test methods | <ul style="list-style-type: none"> ● Method B (MVR/MFR): Automatic ● Method A (MFR): Manual operation (Automatic optional) |
| Sample feeding | Manual operation |
| Weight lifting | Automatic |
| Residue emptying | Automatic |
| Cylinder cleaning | Automatic* <i>*Except setting & disposal of cleaning gauze</i> |
| Piston cleaning | Manual operation |
| Orifice die cleaning | Manual operation |
| Options | <ul style="list-style-type: none"> ● Automatic cutting device ● Die plug ● Strand collection device ● Method A automation ● Data processing software ● 400°C option |
| Power supply | Single-phase, AC100V, 50/60Hz, 15A (or specify) |
| Compressed air | 0.6MPa |
| Dimensions | W740 x D605 x H*1100 to 1180mm <i>*Level adjustment</i> |
| Mass (Approx.) | 150kg <i>*Except test load & option</i> |

Related standards

| | |
|------------------------------|---|
| ISO 1133-1 (JIS K 7210-1) | Plastics-Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics |
| ASTM D1238 | Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer |

Specifications are subject to change without notice.



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