



QAQC LAB

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3. Operating instructions: **Minor 200**



Technical specifications

SIEVE SHAKER MODEL:

Minor 200

General Information

The Minor 200 has been developed and manufactured to combine low cost with the benefits of a well-designed and engineered shaker. It incorporates many features usually found only on larger, more expensive models. It is ideal for the use in laboratories and a plant since it is compact and genuinely portable (weighing only 16 kg).

The sieve stack is held firmly in position by a clamping belt system. Removing it allows the whole unit to be stored in a space less than 200 mm high. There are no rotating parts in the Minor 200 - consequently it is quiet in operation and maintenance free.

Advantages

- Electromagnetic drive for quiet and virtually maintenance free operation
- Compact and portable (weighing only 16 kg)
- Requires only small storage space due to small footprint
- Easily removable clamping belt system (included)
- Easy to use
- Different voltages available
- Complies with the requirements of AASHTO T 27



The Minor 200 **is not recommended for any wet sieving operations!**



Do not make any changes to the machine and use only spare parts and accessories approved by Endecotts Ltd.

The declaration of conformity to the European directives by Endecotts will otherwise lose its validity.

Furthermore this will result in the loss of any kind of guarantee claims.



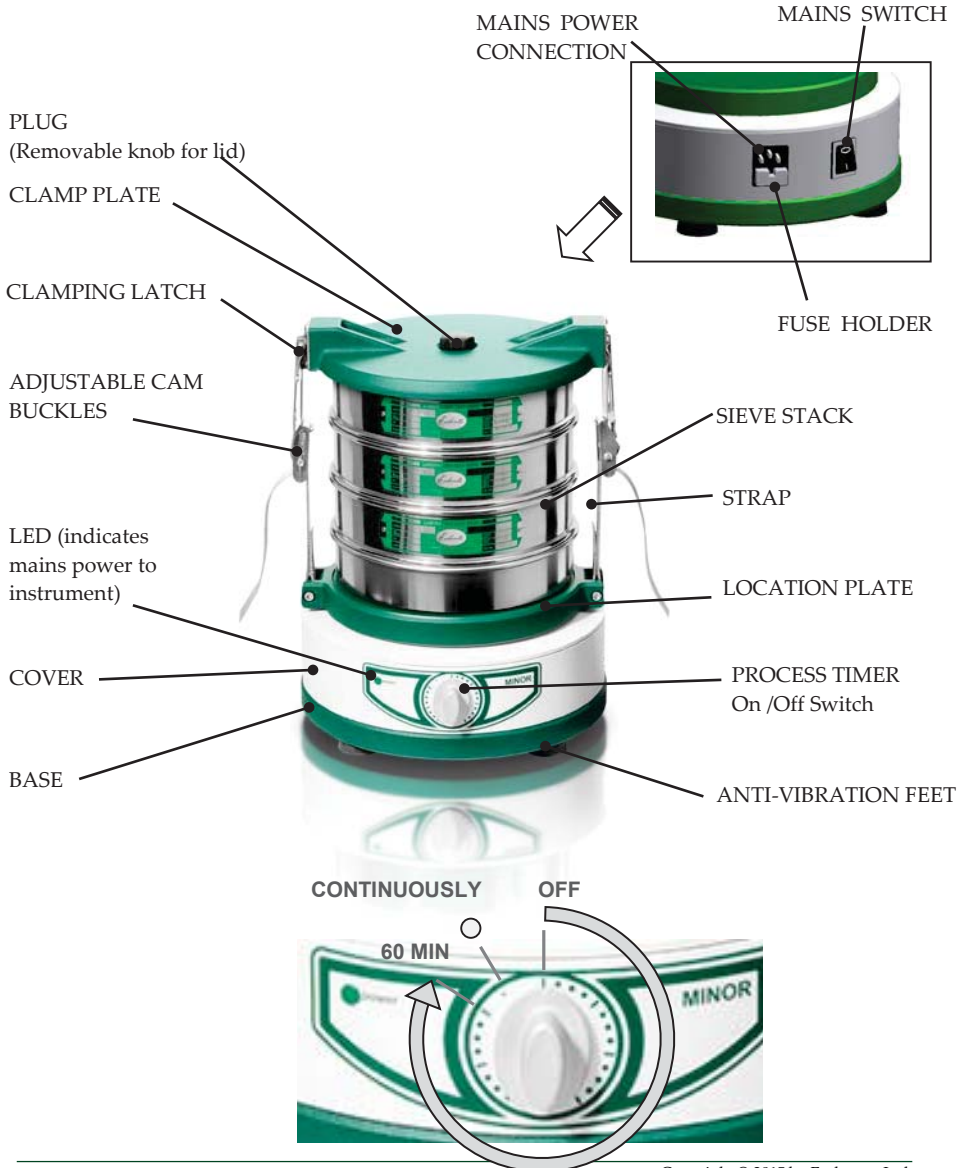
Specifications

Range	38 μm to 125 mm
Drive / sieving motion	electromagnetic
Max. Batch / feed capacity	3 kg
Max. Number of fractions	8 full height / 16 half height (200 mm or 8")
Amplitude	~ 1.6 mm* fixed
Speed	3,000 min^{-1} at 50 Hz
Time display	analogue, 0 - 60 min or continuously
Suitable for dry sieving	yes
Suitable for wet sieving	no
Sieve diameter	100 / 200 mm or 3" / 8"
Clamping device	clamping belt system (included)
Model	bench top
Protection code	IP 20
Electrical supply	different voltages available
Power connection	1-phase
$\text{\O} \times \text{H}$	262 x 126 mm
Net weight	16 kg

(*) depending on load

Controls and Functions

Operators should be familiar with and fully understand the controls and indicators before operating this machine.



Setting Up

Electrical connections

Ensure that the voltage and frequency on the rating label, at the rear of the shaker, correspond with the local electrical mains supply.

- Connect the Minor 200 to the power supply using the connection cable provided.



Do not connect to any other supply other than stated on the rating label, otherwise electrical and mechanical components can be damaged.

Ambient temperature: 5°C to 40°C



If the ambient temperature is exceeded or drops below the specified value the electrical and mechanical components may become damaged and the performance data can change to an unknown degree.

Atmospheric humidity:

Maximum relative humidity 80% at temperatures up to 31°C, with linear reduction down to 50% relative humidity at 40°C.



At high atmospheric humidity the electrical and mechanical components may become damaged and the performance data can change to an unknown degree.

- ***Mains power connection***
Mains power connection with integral line filter. Ensure the IEC connector on the mains lead is pushed fully into the mains inlet at the rear of the machine.
- ***L.E.D (Mains Connected Indication)***
This is a green L.E.D that indicates electrical power is connected to the equipment. The L.E.D is illuminated when the IEC connector is pushed fully into the inlet and power is switched on at the local outlet.
If the L.E.D fails to light with the local outlet switch in the ON position then the fuse (see “Fuse holder”) has blown or power is not present at the mains.
- ***Fuse (Fuse Holder)***
The fuse is a ceramic fuse. It is important that the recommended current rating is not exceeded and the fuse is replaced with the same type and size. If the fuse blows after replacement then a fault exists in the equipment which must be rectified.

- **Process Timer**

The process timer is a mechanical 0-60 minute timer which also provides continuous running if desired. Operating periods are increased by rotating clockwise and decreased by rotating anticlockwise (the timer will commence timing down as soon as the knob is released, regardless of electrical power being connected or not). When the knob is turned anti-clockwise from off position to the continuous running mark, the shaker will continue running until the knob is returned to the off position.

Start-up and commissioning

The shaker should be set up according to the following procedure.

The following items should be removed from the case and checked before the shaker is operated (Take care the shaker weighs 16 kg):

- 1 off Set-up Instructions.
- 1 off Instruction Manual.
- 1 off Mains Cable.
- 1 off Clamp Plate Assembly.
- 1 off Minor Shaker fitted with Clamping Straps and Buckles.

Position the shaker on a level, rigid and robust bench, suitable for the operation of the sieve shaker. Being placed on a level surface ensures symmetrical distribution of the sample over the sieves, during operation.

Operating Instructions

1. Place the receiver centrally on the location plate..
2. Stack the required test sieves on top of the receiver (min. 1x receiver + 2x sieves + 1x lid).
3. Put the sample in the top sieve and fit the lid.

In order to guarantee exact results under fast sieving conditions, the quantity of material to be sieved should be adapted to the sieve diameter and the nominal mesh size.

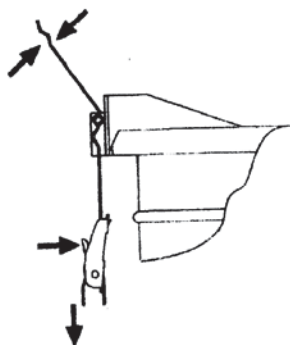
More detail information is displayed in our "TEST SIEVING MANUAL".

4. Place the clamp plate on top of the sieve stack.
5. Raise the clamping latch lever upwards to expose the latch hook.



WHEN PARTICLE SIZE MATTERS

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While holding the clamping latch using one hand, press the lever on the cam buckle with the other hand. Slide the cam buckle along the clamping strap until it can be engaged into the latch hook. Release the cam buckle, pull the loose end of the strap downwards to partially tension the strap.

Do not over tension. The clamping latch lever will remain in the raised position 20-30 degrees from the vertical when partially tensioned. Repeat these actions for the second clamping latch.

6. Press both levers down, closing the latches to clamp the sieve stack. **Do not use excessive force, it may be necessary to loosen the straps slightly to secure.**
7. Repeat previous action to release or increase tension in the strap as necessary to ensure a firm grip!

The Endecotts Minor 200 sieve shaker is maintenance free other than keeping external surfaces clean.

Cleaning - The machine can be cleaned with a soft damp cloth using a solution of water and a mild liquid detergent. **Do not use any solvents for cleaning**

Fuse - *Should* a fuse require replacement this must be of the identical type and rating as the original! The rating of the fuse is marked on a label above the fuse. Disconnect from the mains supply. Remove the blown fuse and place the new fuse in.

Do not over tighten



Damage may occur if the shaker is allowed to operate with a loose clamping plate.

Endecotts machines are fully tested and factory checked before shipping to customers. No parts require lubrication or resetting unless disturbed. The sieve shaker has been constructed and factory tested to ensure correct operation when connected to the specified electricity supply indicated on the machines rating label.

All replacement parts must be ordered by quoting the shaker serial number and the correct part number. Use of unapproved spares or any alteration to the machine would invalidate all warranties and compliance with the European directives for 'CE' marking.



CERTIFICATE OF CE-CONFORMITY
TEST SIEVE SHAKER
MINOR 200

Certificate of CE-Conformity according to:

EC Mechanical Engineering Directive 2006/42/EC

Applied harmonized standards, in particular:
EN ISO 12100 Security of machines

EC Directive Electromagnetic Compatibility 2004/108/EC

Applied standards, in particular:

EN55011:2009+A1:2010, Group 1, Class B Radio disturbance characteristics –
Limits and methods of measurement

EN 61000-3-2:2006+A1:2009+A2:2009
EN 61000-3-3:2008
EN61326-1:2006

Additional applied standards, in particular

EN 61010 Safety prescriptions concerning measuring, operating, controlling and laboratory equipment

Authorised for the compilation of technical documents:

Endecotts Ltd (technical documentation)

The following records are held by Endecotts Ltd in the form of Technical Documentation:

Detailed records of engineering development, construction plans, study (analysis) of the measures required for conformity assurance, analysis of the residual risks involved and operating instructions in due form according to the approved regulations for preparation of user information data.

The CE-conformity of the Endecotts Test Sieve Shaker Type Minor 200 is assured herewith.

In case of a modification to the machine not previously agreed with us as well as the use of not licensed spare parts and accessories this certificate will lose its validity.

Endecotts Ltd

London, July 2014

