

Stomacher® 400 EVO

User Manual



Intro

Thank you for purchasing this Seward product

This manual contains operating instructions for the Stomacher® 400 Evo.

The Seward Stomacher® was developed in the early 70's in response to ever-increasing demands for sample preparation in a fast, consistent and efficient way. Since then, Seward have continually developed the Stomacher® to maintain its position as the market leader ensuring exacting performance, high quality and exceptional reliability.

This manual provides the user with all the information to install, operate and maintain the Seward Stomacher®. Please read the manual carefully before using this equipment.

CAUTION: - This equipment should not be used if damaged in any way. If in doubt please contact your local Seward authorised service centre.

Should any other questions arise please do not hesitate to contact the

Seward Customer Service Department on:-

Telephone: +44 (0)1903 524600

E-mail: info@seward.co.uk

The Seward Stomacher® is a unique homogenising instrument in which the sample is blended within a special disposable bag. The instrument acts on the bag in an action similar to the action of a stomach, hence the name Stomacher®.

The instrument is comprised of an electric motor-driven worm gear unit with twin output shafts coupled to flexible crank mechanisms, which in turn operate two reciprocating paddles. The paddles act on the flexible plastic bag to create the blending forces termed the 'stomaching' action. An important feature of the system is that the working parts do not come into direct contact with the sample being processed.

Protection from the moving parts inside the sample compartment is provided by a protective seal which automatically closes the bag inside the paddle chamber. A cut-off switch ensures the unit cannot work while the protective seal is open or the cover is missing.

Stomacher® is a registered Trademark and may not be used without the express permission of **Seward Ltd.**

www.seward.co.uk

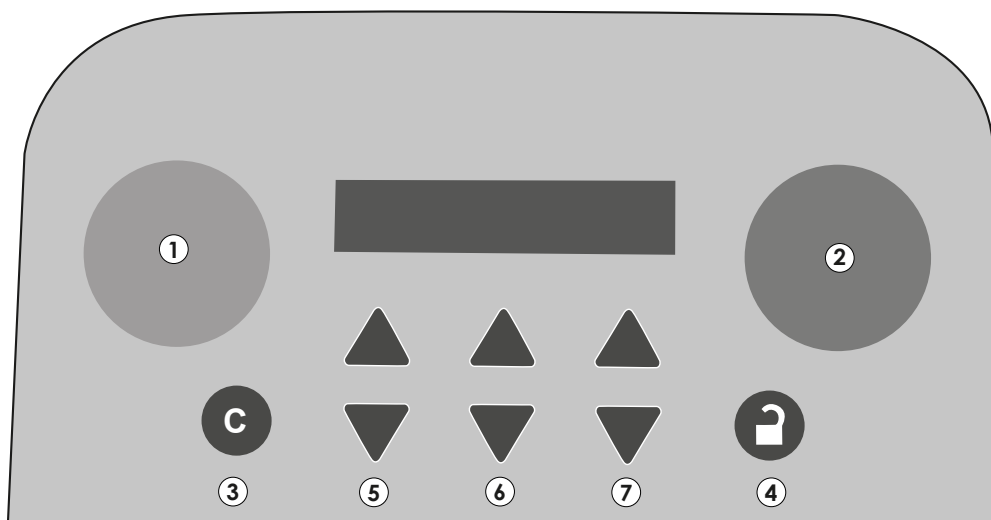


Seward is a part of the FermionX Group.

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1. Control panel



1. Start 2. Stop 3. Clear 4. Lock (Press 4 then 3 to open) 5. Adjust time (9 mins 55 secs in 5 second increments) 6. Adjust speed - Slow, Medium or Fast 7. Program store - 8 program slots

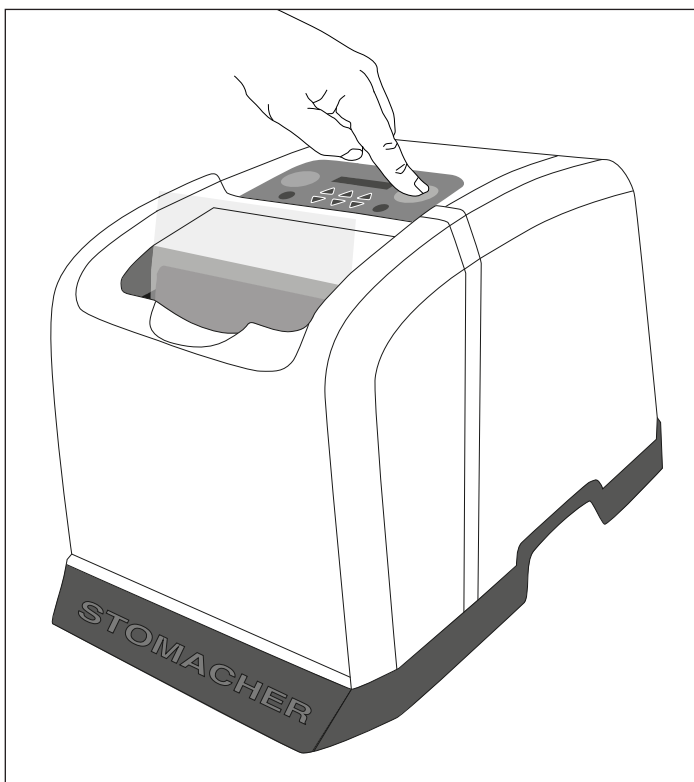
Operation

1. Select program slot 1- 8 - press ⑦
2. Set parameters of speed and time
3. Press lock ④
4. Program will be retained after mains power is switched off

2. Operation

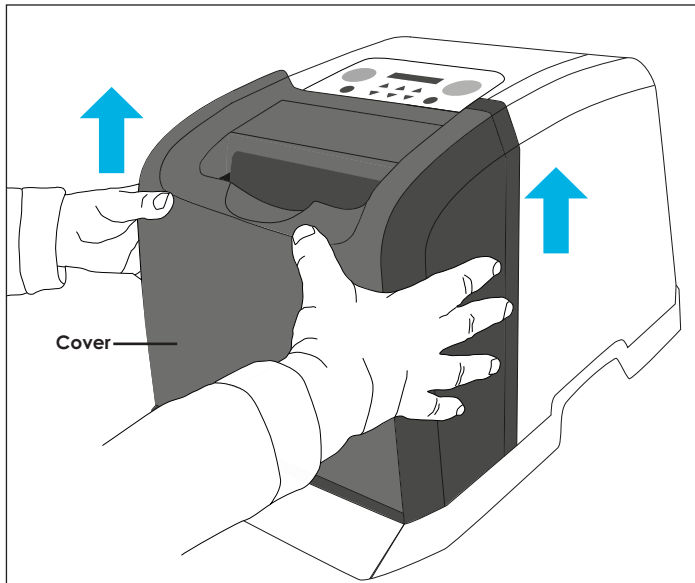


Drop Stomacher bag into the machine

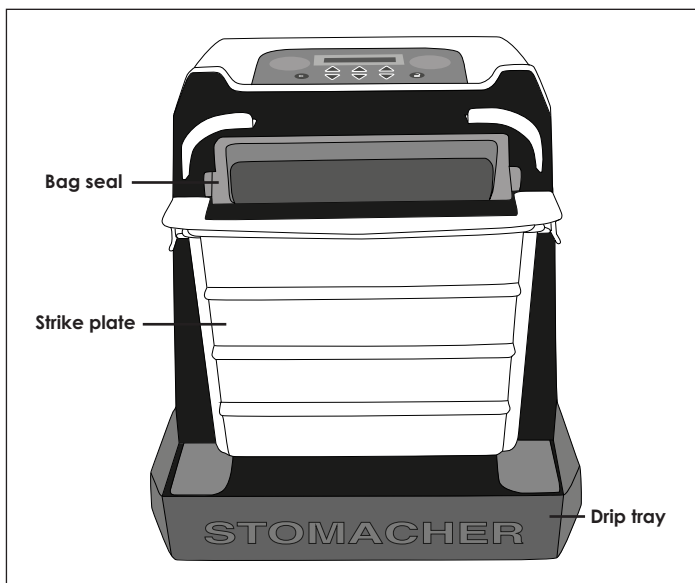


Press the start button

3. Strip down and clean



Remove cover



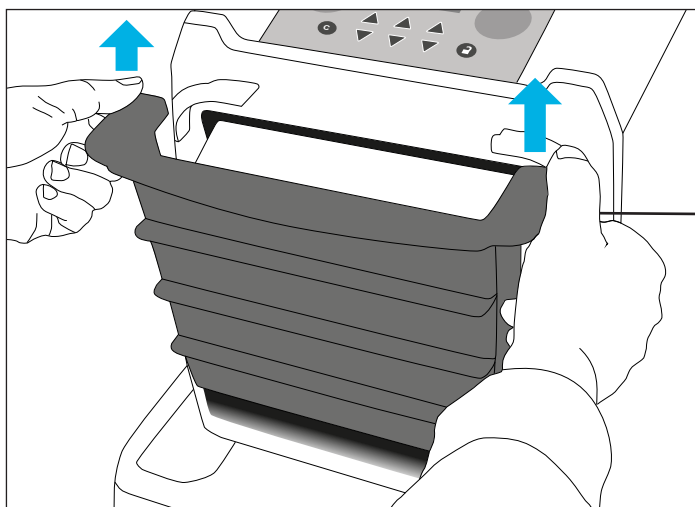
CLEANING INSTRUCTIONS

DISCONNECT from mains when cleaning

DO NOT immerse or spray with water

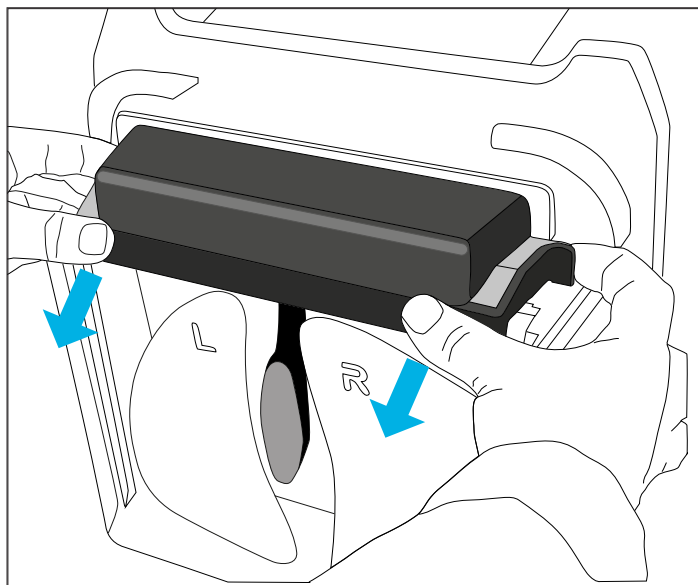
Wipe with damp cloth or anti bacterial wipes

Use only non phenolic cleaning products

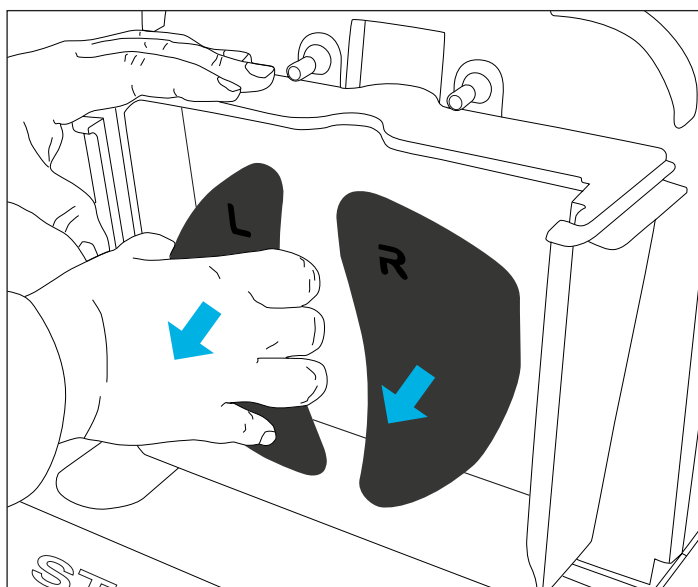


Remove strike plate

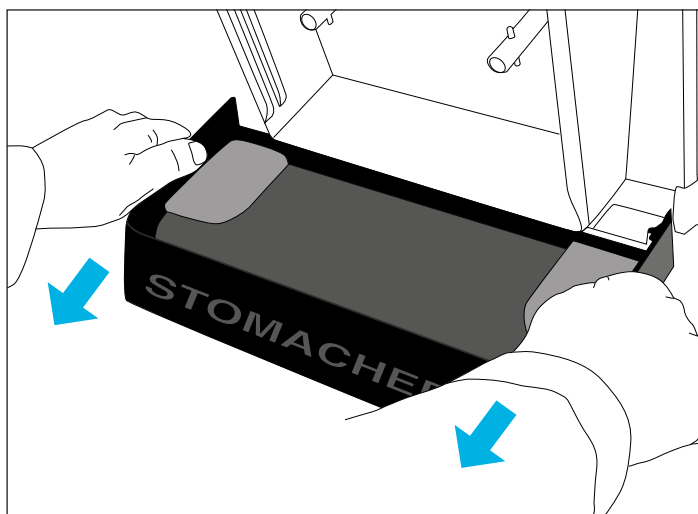
Strip down and clean



Remove bag seal

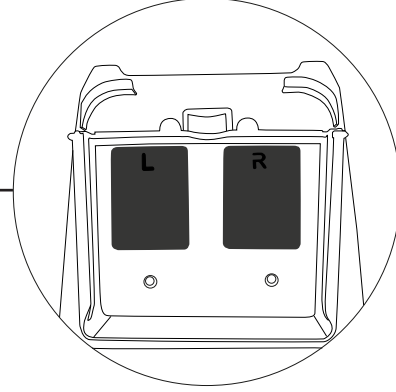
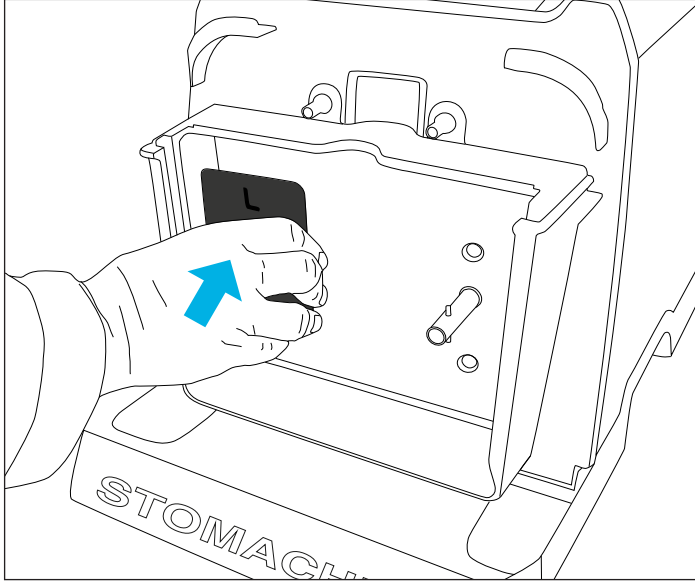


Pull paddles off

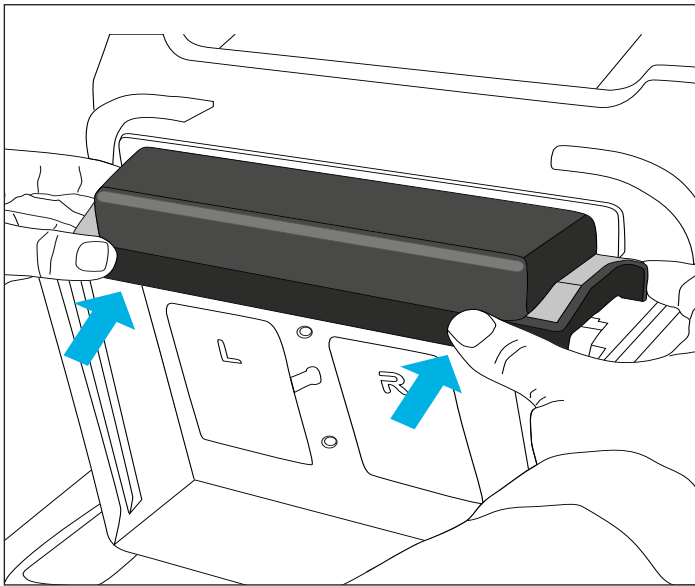


Pull drip tray off

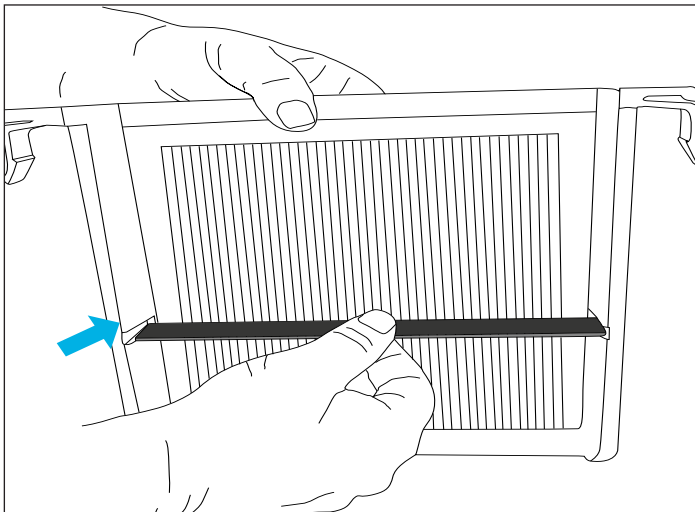
4. Eco bag operation



Install small paddles

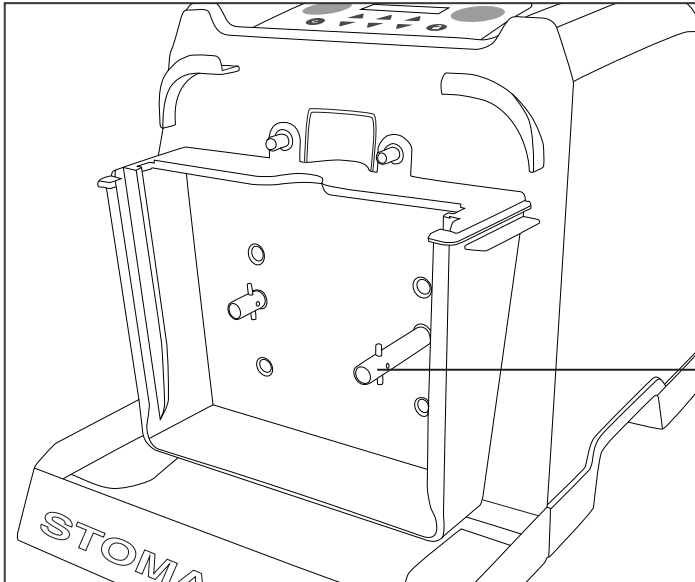


Install bag seal

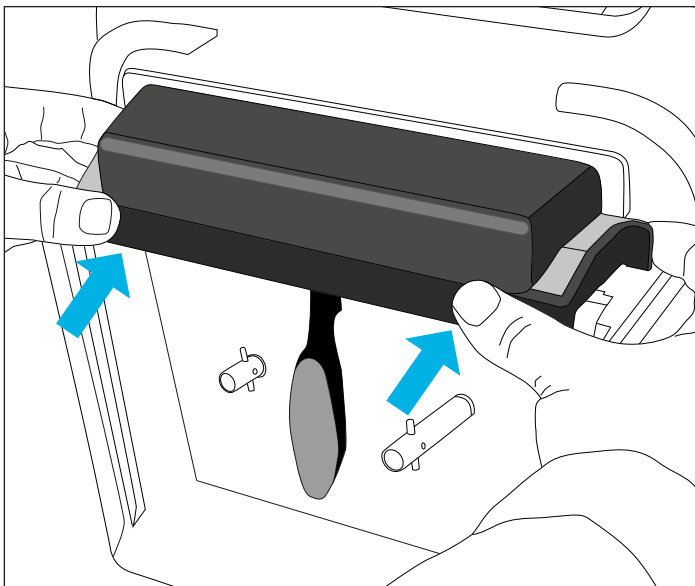


Install bag platform and replace strike plate

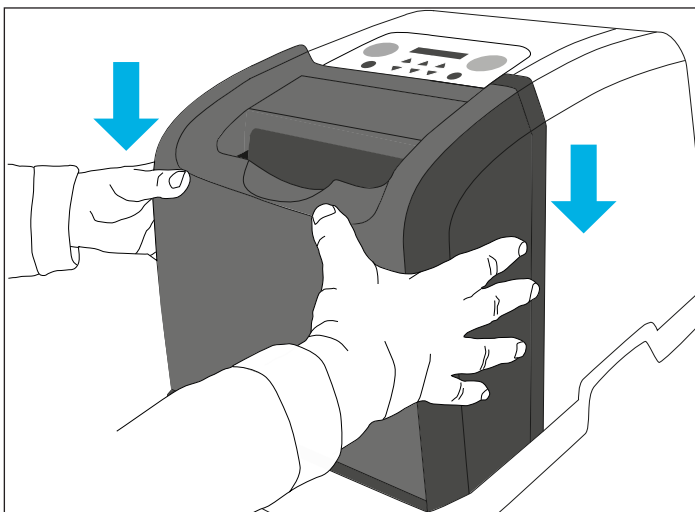
5. Paddle reset



If the paddle shafts prevent the strike plate being reattached then:



Reattach the bag seal



Reattach the cover

Switch the machine off and on again at the mains filter outlet

The machine will go through it's set up processes including levelling the paddles

Once it has done this, remove the cover, reattach the strike plate and replace the cover

6. Warnings/Cautions/Guidance

THIS EQUIPMENT MUST ONLY BE USED IN ACCORDANCE WITH THESE INSTRUCTIONS OR SAFETY PROTECTIONS MAY BE IMPAIRED

ALWAYS USE THE POWER LEAD SUPPLIED. IF THIS IS REPLACED ENSURE THAT A POWER LEAD OF THE SAME RATING IS EMPLOYED OR CONTACT THE MANUFACTURER

INSTALLATION QUALIFICATION

ENVIRONMENT AND SITING

Make sure the instrument has been acclimatised after transportation or storage by allowing it to stand 12 hours at room temperature.

CAUTION to avoid minor injury take care when unpacking and lifting the unit to prevent injury.

Site the instrument on a solid level surface able to take its weight.

Site the instrument with sufficient space at the rear to allow the mains power switch to be accessed and the power cable to be unplugged.

To isolate the unit switch off the mains power inlet at the rear and unplug the cable.

Only use the machine in areas free from aggressive/explosive chemical mixtures.

This equipment shall be connected to a supply containing a protective earth.

CERTIFIED STANDARDS

This instrument conforms to the following standards and is supplied fully tested by the manufacturer:

EMC Directive 2014/30/EU

Low Voltage Directive 2014/35/EU

Machinery Directive 2006/42/EC

IEC 61010-1:2010 Safety Requirement for Electrical Equipment for Measurement, Control and Laboratory Use

IEC 61010-10-051 ed.3.0(2015-03): Particular requirements for laboratory equipment for mixing and stirring

PAT testing should be carried out by a competent person after installation.

CALIBRATION

Stomacher® is supplied fully calibrated by the manufacturer using equipment traceable to national standards. Calibration by the user directly following installation is not required.

Following the expiry of the warranty period service packages are available from your authorised dealer or from Fermionx Limited.

Warnings/Cautions/Guidance

STOMACHER® PROCESS

For best results only use Stomacher® Bag products.

Flammable solvents should NEVER be used in the machine.

Do not overload the machine with bags or load with items that may pierce bags. Contact the manufacturer for advice on the suitability of samples.

Processing time can be set up to 9 minutes 55 seconds in 5 second increments.

Duty cycle 2 minutes with 45 seconds change over time at full speed.

The Stomacher will not restart after a fault or power interruption.

PERFORMANCE QUALIFICATION

REMOVAL OF THE REAR COVER OF THE MACHINE BY UNQUALIFIED PERSONNEL SHOULD NEVER BE ATTEMPTED. THERE ARE NO USER SERVICEABLE COMPONENTS INSIDE.

Return to the manufacturer for repair.

Removal of the rear cover will invalidate the warranty.

ROUTINE MAINTENANCE

Wipe casing with damp cloth every month or as required with non-phenolic disinfectant solution. Do not apply solvents. If in doubt please contact the manufacturer.

Apply mineral oil annually to the paddle shafts.

ERROR MESSAGES

These error messages may appear on the display and this is what they mean and what action should be taken.

“Levelling Error” - paddle level failed, contact the manufacturer.

“Cover Absent”, “Affix Cover” - front cover missing, replace the cover.

“Paddle Motor Error”, “Halting machine” - over current on paddle motor, the machine has stalled because it can not cope with the load. Remove the bag and reduce the sample. Contact the manufacturer if error persists.

“Seal Error”, “Obstruction” - seal can't close properly, look inside the paddle chamber to make sure there is no obstruction and that the seal is mounted properly.

“Seal Error”, “No strike plate” - strike plate missing, replace the strike plate.

“Seal Absent”, “Affix Seal” - seal magnet not detected, check magnet is in position and replace seal.

7. Specifications

STOMACHER 400 EVO

Cat No.	0400/002
Dimensions	H300mm x W310mm x D480mm
Weight	(unpacked) 18.8kg
Supply voltage	100-240V
Supply frequency	47-63Hz
Max rated power	100W
Plug top fuse	F5A (UK chord set)
Mains inlet fuse	1.0A, 250V, anti surge
Insulation	Class 1 (Earthed)
Installation	Over voltage category II
Pollution	Pollution Degree 2
Disposable bag sizes	Various
Minimum recommended capacity	80ml
Maximum recommended capacity	400ml
Maximum recommended sample temperature	60° C
Recommended operating ambient temperature range	10-40°C
Recommended operating relative humidity range	10-89%
Recommended maximum operating altitude	2000m
Timer	9 minutes 55 seconds in 5 second increments
Paddle speed	Slow - 150 rpm (400 equivalent) Medium - 180 rpm (400 equivalent) Fast - 210 rpm (400 equivalent)
Paddle clearance	4mm

8. Bags & Accessories

To get the optimum performance from the Stomacher® EVO 400 we recommend that only genuine Seward Stomacher® bags and accessories as shown in the table below, are used.

Stomacher® 400 Eco Bags and Accessories

for Seward Stomacher® 400 EVO only

Product Code	Description	Test Volume	Dimensions (mm)	Bags per pack
BA6241	Stomacher® 400 Eco bag (PATH.)	1:10 PATH Test (25g:225ml)	177 x 200	500
BA6341	Stomacher® 400 Eco bag (TVC)	1:10 TVC Test (10g:90ml)	155 x 200	500
BA6195	Bag opener for Stomacher® 400 Eco bags			

Stomacher® 400 Standard Bags

for all Seward Stomacher® 400 (EVO, Circulator and Classic)

Product Code	Description	Test Volume	Dimensions (mm)	Bags per pack
BA6041	Stomacher® 400 Classic Bag	400ml	177 x 305	500

®

Full range of Stomacher® bags and accessories available at www.seward.co.uk/stomacher-bags/

Contact Seward for further information on our range of products including the **Stomacher® 400 EVO**, and see how much you could save on your consumable costs.

seward

World leaders in sample preparation



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