



Nova™ Microcinerator

Operating Instructions Consignes d' utilisation Instrucciones de operaciones Bedienungsanleitung



**S3010 - 100V
S3011 - 120V
S3022 - 220V
S3024 - 240V**

© 2005 Argos Technologies Inc.

www.argos-tech.com

Argos Technologies, Inc. 1551 Scottsdale Court, Suite 200, Elgin, IL 60123,
Tel (US) 800-886-8675, Tel (outside US) 847-622-0456, Fax 847-622-0454

Contents

Page	Subject
2	Product Description and Environmental Conditions
3	Materials and Specifications
4	Symbols Used
5	Warranty Information
5	Getting Started
6	Part Descriptions
7	Sterilizing Loops and Needles
8	Tilting the Burner Head
9	Maintenance, Care & Safety Precautions
10	Trouble Shooting
11	Replacement Parts Ordering Information
12-13	Accessories
14	Repair Service
15-16	Replacing the Sterilizing Element

Product Description

Thank you for purchasing the Nova™ Microcinerator. Maintained properly, this instrument will give years of trouble free service. Please take the time to read the instructions thoroughly before you use this product.

The Nova™ Microcinerator is a very easy to use loop and needle sterilizer. Most types of reusable loops and needles, including nichrome and platinum can be used; however, if you have any questions concerning your particular application, please contact your local distributor. The space saving Nova™ Microcinerator with unique tilting burner head will sterilize your loops in just 5 – 7 seconds. There are no gasses, flames or infectious splatter to worry about. Please review the accessories page for our full range of complimentary products.

Environmental Conditions

- a) For indoor use.
- b) Altitude up to 2 000 m;
- c) Temperature 5 °C to 40 °C;
- d) Maximum relative humidity 80 % for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 40 °C;
- e) MAINS supply voltage fluctuations up to ±10 % of the nominal voltage;
- f) This product is designed to withstand transient overvoltages typically present on the MAINS supply. Category II of IEC 60364-4-443.
- g) The Rated Pollution degree is normal.

Important: If this product is subjected to humidity levels of over 80%, please allow 48 hours in a normal laboratory environment for the product to stabilize before using.

Materials and Specification

Voltages

Part No S3010 - 100V, 50 HZ, 235W, 2.3 amps
Part No S3011 - 120V, 60 HZ, 200W, 1.6 amps
Part No S3022 - 220V, 50 HZ, 200W, .94 amps
Part No S3024 - 240 V, 50 HZ, 200W, .83 amps

Dimensions:

Packed: 300x300x200, 2.3kilos
Unpacked 240(max)x200x180, 1.2kilos

Ceramic Element Insulation

Colour:
Basic Composition:
Recommended Use Limit:
Melting Point:
Typical Dry Density:
Specific Heat Capacity at 1093°C (2000°F):
Tensile Strength - 6.4mm (1/4"):

Hot Gas Erosion Resistance:

Chemical Analysis:

Normal Shelf life one year in unopened containers

Materials:



Stainless Steel 316
Anodized aluminum
Acetal
Spring Steel
Polycarbonate
Epoxy painted cast aluminium
Ceramic

White
Alumina-silica
1083°C (2000°F)
1790°C (3260°F)
190-290kg/m³ (12-18lb/ft³)
1130J/kg°C (0.27Btu/lb°F)
Wet= 1.2x10⁵N/m² (17psi)
Dry= 3.5x10⁵N/m² (50psi)
Test procedure based on British
Gas Council Research Comm.
GC173 = over 30.5m/sec (100ft/sec)
Al₂O₃ 34.5%
SiO₂ 62.8%
Fe₂O₃ 0.64-0.80%
TiO₂ 0.54-1.37%
Alkali 0.23%

Ceramic Element Core - Mullite

Density (g/cm³): ≥ 2.65
Flexural Strength, 3 or 4 pts @ 20°C (MPa): ≥ 80
Linear Thermal Expanding Coefficient (1x10.6mm/°C): ≤ 6
Dielectric Strength (@20°C KV/mm): ≥ 18
Dielectric Constant (1MHz @ 20°C): ≤ 7.5
Volume Resistivity (@100°C, Ωcm): ≥ 10¹¹
Service Temperature: 1500°C
Chemical Analysis: Al₂O₃ 69%
SiO₂ 28%
Fe₂O₃ 0.9%
Other 2.1

Symbols Used

	T	A	
Easily touched high temperature parts	Time Lag Fuse	Amperes	Protective Conductor Terminal

IMPORTANT:

If this product is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

All personnel who operate and maintain the equipment are trained in its operation and safe use.

WARRANTY INFORMATION

The Nova™ Microcinerator is guaranteed free from defects in workmanship and materials for a period of one year after the customer receives the product. This DOES NOT include the Sterilizing Element, which is guaranteed for six months. In order to qualify for warranty repair, the customer must return the warranty card supplied with the unit that includes all of the information required to validate proof of purchase.

Should warranty service be required, repair or replacement will be provided by Argos without charge. Freight expense shipping the unit to Argos will be the responsibility of the purchaser. There are no other warranties or guarantees, implied or otherwise expressed, including any warranties of application or merchantability.

Damage caused from improper use or maintenance will not be covered by this warranty agreement. In such cases the warranty will be considered null and void.

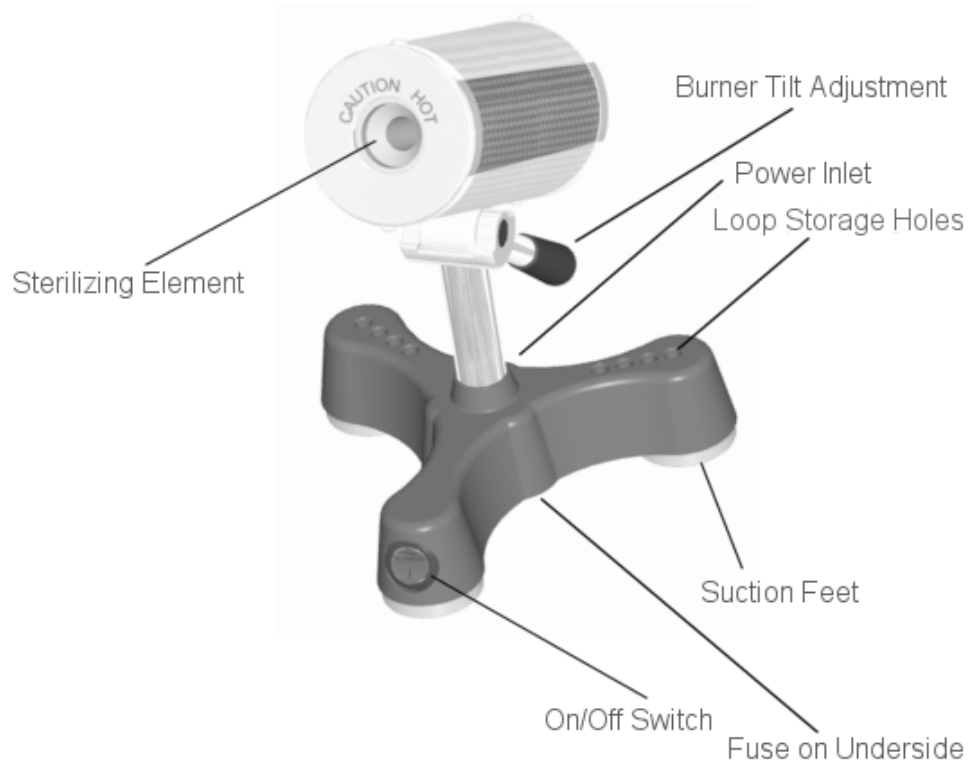
Getting Started

Please check the voltage of your unit before unpacking.

1. Remove all protective packaging from your Nova™ Microcinerator. Note - the cork bung protecting the element MUST be removed before switching on the unit.
2. Check to ensure the Sterilizing Element is free from debris.
3. Attach the power cord supplied into the rear of the base unit. Plug the opposite end of the cord in to a suitable power outlet.
NOTE: Use of a 2-pronged adapter IS NOT recommended.
4. Adjust the burner unit to a comfortable position (see page 7). Always allow your Nova™ Microcinerator to cool for one hour before adjusting the burner head or moving to a new location.
5. Flip the rocker switch to "on" to activate the unit. Note, the switch should illuminate red.
6. The Nova™ Microcinerator will reach 816C/1500F degrees within 10 minutes after the unit is switched on. The Nova™ Microcinerator can be left on for extended periods of time.

ATTENTION: DO NOT touch any part of the heating guard or end caps when the Nova™ Microcinerator is in the "on" position or for one hour after being turned off!

Part Descriptions



© Argos Technologies Inc 2005

Note: to ensure optimum performance your Nova™ Microcinerator should be left on all day. During periods of prolonged non-use however, the unit should be turned off to extend the life of the heating element.

Sterilizing Loops and Needles

1. Carefully insert the loop or needle at least halfway into the sterilizing element to avoid aerosoling any residual contaminants. Take care not to scrape the element walls as this may reduce the efficiency of the heating unit.
2. The loop or needle will be sterilized in 5 to 7 seconds. Heating your loop or needle until it glows is not necessary.
3. Loops when not in use can be placed in the loop storage holes located in the legs of the base unit.



© Argos technologies Inc 2005

Tilting the Burner Head

The burner head angle can be altered to suit your working style.

Allow the burner to cool for 1 hour before adjusting.

Turn the burner tilt adjustment lever counter clockwise approximately ½ turn as shown and tilt the burner head to the desired position.



© Argos Technologies Inc 2005

To lock the burner head, turn the burner tilt adjustment lever clockwise until the head is secure. Caution, do not over tighten the burner adjustment lever.



© Argos Technologies Inc 2005

Maintenance, Care & Safety Precautions

WARNING!!

The Nova™ Microcinerator should never be submerged in water or any other cleaning compounds. To clean use a damp cloth only and avoid introducing any fluids into the unit. As with any electrical instrument, it is important not to allow any liquid to enter the Nova™ Microcinerator. Doing so may cause damage to the electrical components, electrical shocks to the user or create a fire hazard. If you have any questions on how to care for your Nova™ Microcinerator, contact your distributor!

Safety Precautions

1. The Nova™ Microcinerator can reach external temperatures of 350 degrees F. Do not use any flammable materials in conjunction with the unit when in operation.
2. Never introduce any sharp objects into the sterilizing element. Doing so can damage the ceramic tube and cause the element to malfunction, voiding the warranty.
3. Only use insulated (handles) reusable loops and needles with the Nova™ Microcinerator. See page 10 for a complete listing of approved products.
4. When using the loop holder, avoid leaving the loops and needles within the heater element for extended periods of time. Doing so will overheat the loop rest causing a potential safety risk and may damage your loop or needle.
5. NEVER insert disposable plastic loops or needles into the Nova™ Microcinerator

Maintenance

1. If your Nova™ Microcinerator will not turn on, check the fuse located under the unit. Be sure to replace any defective fuses with the appropriate voltage.
2. Inspect the tube periodically to check for any signs that the element may need replaced. Look for any indication of residue buildup or small cracks that may reduce the efficiency of the element. When the unit is turned on, the cracks will appear as bright, yellow orange lines in the tube. You can also inspect the tube when unit is turned off, though the cracks may be more difficult to view. Should the element need replacing, please refer to page 14 of the manual.

Cleaning and Care

1. Be sure that the Nova™ Microcinerator is in the off mode and that it has been cooled for at least one hour prior to any cleaning or general maintenance.
2. **DISCONNECT** the power cord from the power source and remove the cord from the back of the unit. This will ensure no power can be supplied to the unit while cleaning.
3. To clean, use a damp cloth only on the sterilizer. A mild detergent can be used as well as isopropyl alcohol. Never spray cleaners directly onto the unit. Lightly dampen your cleaning towel and wipe down, being sure to remove any excess liquid.
4. Take extra precautions when cleaning around the power cord, sterilizing element or heat guard. See warning listed above

Trouble Shooting

Switch not illuminated – Check Fuse and replace if required.

Burner not heating – If the burner is not heating and glowing red and the switch is illuminated the burner element may need to be replaced. Check the number in the Replacement Parts section and order from your vendor. Note that only qualified personnel should perform repairs.

Note that there are no user serviceable parts inside of the unit. Switch off and disconnect from the power source and allow to cool for 1 hour before carrying out any repairs.

Replacement Parts Ordering Information

Replacement parts should be ordered from your local distributor

Nova™ Microcinerator

Part No.	Description
S3010	100V Nova™ Microcinerator
S3011	120V Nova™ Microcinerator
S3022	220V Nova™ Microcinerator
S3024	240V Nova™ Microcinerator
S3010A	Replacement Fuse 3.15 Amp – Asia
S3011A	Replacement Fuse 2.5 Amp - USA
S3022A	Replacement Fuse 1 Amp – International
S3010H	100V Replacement Heater Element
S3011H	120V Replacement Heater Element
S3022H	220V Replacement Heater Element
S3024H	240V Replacement Heater Element
S3012	Three Place Slide Dryer
S3013	Aluminium Loop Rest

Inoculating Loops and Needles

Part No.	Description	Loop ID
Loops		
L1100	Calibrated Loop 10UL	4mm
L1101	Calibrated Loop 1UL	1.45mm
L1102	Small Loop	2.26mm
L1103	Medium Loop	2.91mm
L1104	Large Loop	3.57mm
Loop Holders		
L1110	Brass Loop Holder 6"	
L1111	Brass Loop Holder 8"	
Handle & Loop		
L1120	Small Streaker Blue	2.26mm
L1121	Medium Streaker Green	2.91mm
L1122	Large Streaker Red	3.57mm
L1123	Calibrated Streaker 1UL	4mm
L1124	Calibrated Streaker 10UL	1.45mm
Needles		
L1125	Micro Needle	

Accessories

3 Place Slide Dryer – Part Number S3012.



Use the heat already generated by your sterilizer to dry your slides.

Aluminium Loop Rest – Part Number S3013.



Guides the loop into the optimum sterilizing position and protects your loop handles from overheating and melting.



The Slide Dryer and Loop Rest can be used together.

Repair Service

Should your Nova™ Microcinerator require service or repair, please contact Argos Technologies customer service. They will issue a Return Authorization Number and advise on the proper packaging and method of shipment.

Customer Service: in US: 800-886-8675 outside US: 847-783-0456

Argos Technologies, Inc.
1551 Scottsdale Court
Suite 200
Elgin
IL 60123
Attn: Technical Service

Be sure to list your RA number on the shipping label.

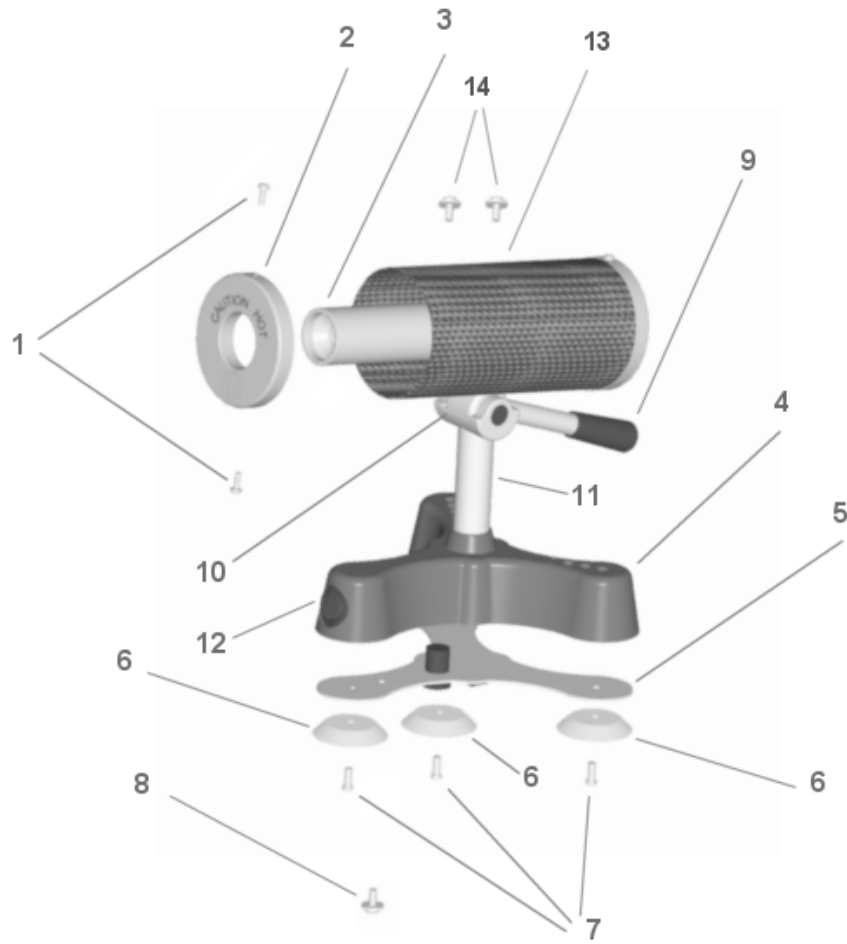
Please use the same numbers listed above, should you require any technical assistance or support.

NOTE: With the exception of replacing the Sterilizing Element, there are no other serviceable parts in the Nova™ Microcinerator. Any other maintenance or repair should be performed by a trained Argos Service Technician.

Replacing the Sterilizing Element

Important – Only qualified personnel should carry out repairs to this product.

Always switch the unit “off” and disconnect from the power source and allow to cool for 1 hour before carrying out any repairs, cleaning or maintenance.



© Argos Technologies Inc 2005

Tools required:

- Cross headed (Philips) screwdriver
- 7mm AF (9/32" AF) spanner or socket wrench

1. Remove screws (1).
2. Remove front face (2).
3. Remove the suction feet screws (7) and suction feet (6).
4. Remove screw (8).
5. The base plate (5) can now be removed.
6. Disconnect the sterilizing element (3) wires from the on/off switch (12). Note the connections.
7. Carefully pull the sterilizing element out pushing the wires through from the underside.
8. Remove the sterilizing element (3) and dispose of appropriately.
9. Remove the new sterilizing element from it's packing. Check that there is nothing inside the element core. Caution: the sterilizing element is fragile, please handle with care.
10. Remove the M4 hexagonal cowl securing screws (14) using the 7mm AF (9/32" AF) spanner or socket wrench and remove the cowl (13).
11. Carefully feed the wires through the cowl (13) and tilting mechanism (10) and support shaft (11).
12. Pull the wires through and fit to the on/off switch (12) terminals. The polarity is not important.
13. Replace the base plate (5) and refit the suction feet (6) and screws (7).
14. Replace the cowl (13) and secure using the M4 hexagonal cowl securing screws (14).
15. Engage the sterilizing element into the rear of the cowl (13) and re-fit the front face (2).
16. Re-fit the screws (1).
17. Check that the inside of the sterilizing element is clear of debris.
18. Attach the power cord supplied into the rear of the base unit. Plug the opposite end of the cord in to a suitable power outlet. **NOTE: Use of a 2-pronged adapter IS NOT recommended.**
19. Adjust the burner unit to a comfortable position (see page 7). Always allow your Nova™ Microcinerator to cool for one hour before adjusting the burner head or moving to a new location.
20. Flip the rocker switch to "on" to activate the unit. Note, the switch should illuminate red.
21. The Nova™ Microcinerator will reach 816C/1500F degrees within 10 minutes after the unit is switched on. The Nova™ Microcinerator can be left on for extended periods of time, though switching the unit "off" when not in use, will increase the sterilizing element life.

ATTENTION: DO NOT touch any part of the heating guard or end caps when the Nova™ Microcinerator is in the "on" position or for one hour after being turned off!