



ALPS5000 Automated Plate Sealer

User Manual

MNLALPS5000 • Revision A • October 2020

IMPORTANT Read this instruction manual. Failure to follow the instructions in this manual can result in damage to the unit, injury to operating personnel, and poor equipment performance.

CAUTION All internal adjustments and maintenance must be performed by qualified service personnel.

Material in this manual is for informational purposes only. The contents and the product it describes are subject to change without notice. Thermo Fisher Scientific makes no representations or warranties with respect to this manual. In no event shall Thermo be held liable for any damages, direct or incidental, arising from or related to the use of this manual.

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Safety Considerations

It is important that ALPS5000 is installed and operated in compliance with all applicable Health and Safety requirements. It is your responsibility to ensure that you identify and comply to all relevant Health and Safety regulations. Failure to do so may result in damage to the equipment and could cause personal injury. Read this guide carefully before handling or operating this equipment.

Under no circumstances will the supplier of this equipment be liable for any incidental, consequential or any special damages of any kind whatsoever, including but not limited to lost profits arising from, or in anyway connected with the use of this equipment or this Instruction manual. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Warning Symbols Used In Accordance With IEC 417:



This symbol used alone indicates important operating instructions which reduce the risk of injury or poor performance of the unit.



CAUTION: This symbol, in the context of a CAUTION, indicates a potentially hazardous situation which if not avoided could result in minor to moderate injury or damage to the equipment.



WARNING: This symbol indicates potentially hazardous situations which, if not avoided, could result in serious injury or death.



WARNING: This symbol indicates situations where dangerous voltages exist and potential for electrical shock is present.



CAUTION: Protective Conductor Terminal



CAUTION: HOT SURFACE/HOT AREA, This Instrument is fitted with an internal heater with a Maximum temperature of 199°C when in use.



This symbol indicates a need to use gloves during the indicated procedures. If performing decontamination procedures, use chemically resistant gloves. Use insulated gloves for handling samples and when using liquid nitrogen.



CAUTION
Finger trap
keep clear

CAUTION: Keep hands clear during priming process to avoid risk of finger entanglement and entrapment.



Before installing, using or maintaining this product, please be sure to read this manual and product warning labels carefully. Failure to follow these instructions may cause this product to malfunction, which could result in injury or damage.

MAINS SWITCH SYMBOLS

I = ON

0 = OFF

Below are important safety precautions that apply to this product:



WARNING: Do not operate this instrument in an atmosphere containing explosive gases.



WARNING: Only approved supplied mains cord set must be used with this instrument.



WARNING: If it is required to use an extension lead, the lead **MUST** be earthed.



CAUTION: Safety guards must be used at all times of operation of the unit. At no time should the sealing film be in place whilst the unit is being transported. The ALPS5000 is designed to be operated with a maximum sealing temperature of 199°C. This unit should be switched on 10 minutes prior to use to reach the set temperature. This unit should only be used in a suitable ventilated area.

Note: The ALPS5000 is supplied for direct connection to a nominal 115 VAC or 240 VAC mains supply. The equipment can be used at a minimum of 108V to account for variation in supply when connected to nominal 115VAC, and a maximum of 250V when connected to nominal 240VAC.

It is not recommended to use solvents to clean the unit. Certain components become hot during the correct operation of this equipment. These components are marked and care should be taken to avoid personal injury. The electrical supply must be disconnected, prior to the removal of any safety guards. Thermo Fisher Scientific accepts no responsibility for the misuse of this equipment.

Introduction

The ALPS5000 System has been designed for robotic integration, or stand alone sealing, offering a fast effective solution for the heat-sealing of micro well plates for experimentation, storage or transportation.

Heat sealing is now widely considered to be the most effective way of sealing plates for assays, thermal cyclers, storage and shipping. The extensive range of sealing materials now available for our new instrument, gives a permanent or peel-able high integrity seal for all plate material types.

The range includes ultra clear materials for colorimetric or fluorimetric assays, along with solvent resistant seals with exceptional low temperature (-80° C) storage characteristics and a breathable gas permeable seal.

The new ALPS5000 has a compact footprint saving bench space. It features a serial port allowing RS232 and external foot switch operation for robotic control and a touch screen for manual operation.

Both seal time and temperature are fully adjustable. The unit has built-in sensors to monitor and provide error output warning signals. The unit produces no waste material and seals plates of different heights.

ALPS5000 is designed to be integrated into robotic platforms from all leading automation companies.

Unpacking ALPS5000 System

When unpacking your ALPS5000 unit, visually inspect the unit for any damage which may have occurred during shipping. Do not use the unit if there is any damage. Check that all components are present. See packing list.

The unit is supplied in a re-usable crate and a transit bracket that must be retained in case the unit requires servicing. To reposition the transit bracket prior to first use, follow the steps given in the manual. The ALPS5000 is a fragile instrument and requires proper packaging for shipping. Inadequate packaging can lead to damage.

Use appropriate PPE and necessary tools available in the facility to remove the unit from the crate properly.

Once the ALPS5000 is on a bench, open the door using a flat screw driver. Cut and remove the zip tie used to secure the foil feed mechanism.

Thermo Fisher Scientific accepts no responsibility for any damage incurred during return shipping unless the unit is

packed in the same packaging as it was delivered. This equipment must be lifted using the appropriate lifting and carrying equipment available in the facility.

Repositioning the Transit Plate Prior to First Use

The ALPS5000 comes shipped with a transit plate installed internally to protect the instrument from damage during shipping. The transit plate is used to secure the internal foil guide with a cable tie as well as to prevent the plate shuttle from moving.

The transit plate must be retained should the instrument need to be shipped in the future. The transit plate is easily removed and repositioned within the ALPS5000 for normal operation via the provided thumb screws.



Figure 1. Unlock front service panel



CAUTION: Machine should be switched off and all power removed from the system.

Use flat bladed screwdriver or similar object, rotate slot screw, located on the ALPS5000 door, approximately 90° CCW. This will unlock and drop down front service panel to gain access to the main sealing area and front of the machine.

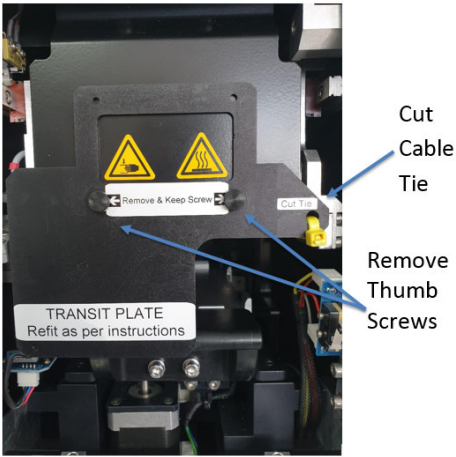


Figure 2. Remove Transit plate and Cable Tie

Cut the exposed cable tie and remove from the unit. If the cable tie (or a portion of the cable tie) falls into the unit, cut it carefully and remove from the unit prior to operation.

The transit plate is secured onto the ALPS5000 with two thumb screws. Unscrew and remove the screws and use caution to not drop the transit plate onto or into the ALPS5000.

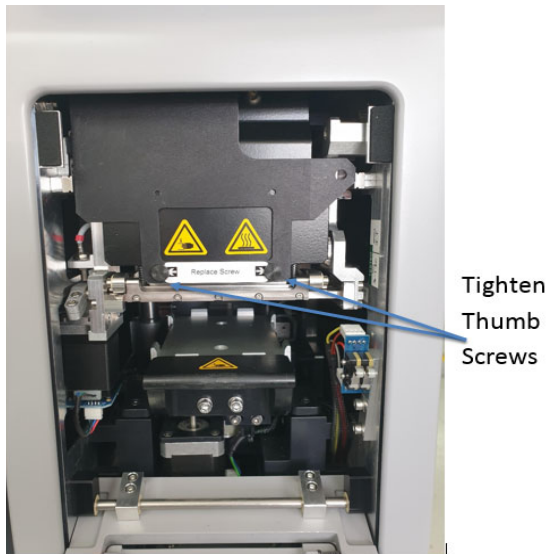


Figure 3. Vertically Flipped and Repositioned Transit Plate

Vertically rotate the transit plate so that the back side of the plate is facing forward. The caution symbols should be visible and the cable tie hole should be higher and to the right side of the ALPS5000.

With the transit plate repositioned, use the lower holes in the plate to attach the transit plate back to the ALPS5000. Be sure to finger tighten the thumb screws so that the plate or screws do not come loose during operation.

Raise the front service panel back in to place and turn the slot screw approximately 90 degrees clockwise to secure the panel in place.

Installing the Magnetic Foil Guide

The Magnetic Foil Guide must be installed onto its platform and correctly aligned prior to use, and for proper function of the ALPS5000.



1. To access the Magnetic Foil Guide platform via the side service panel, use a 2.5 mm Allen key (provided) to remove the 4 screws as shown.



CAUTION: This panel is not interlocked. Machine should be switched off and all power removed from the system before gaining access to side service panel.

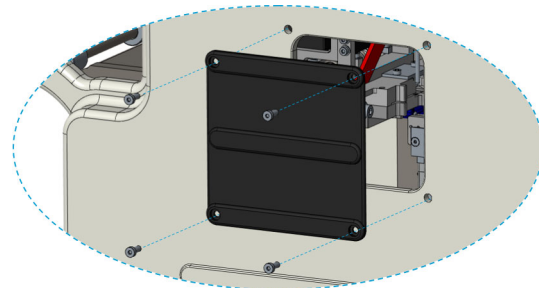


Figure 4. Removal of service panel

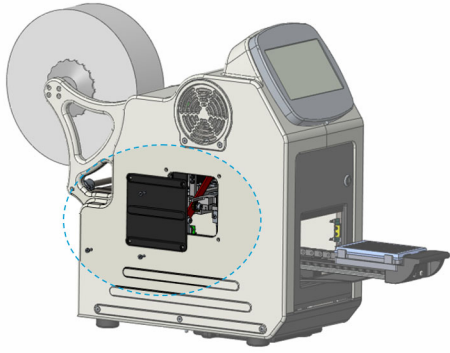


Figure 5. Service panel to access magnetic foil guide

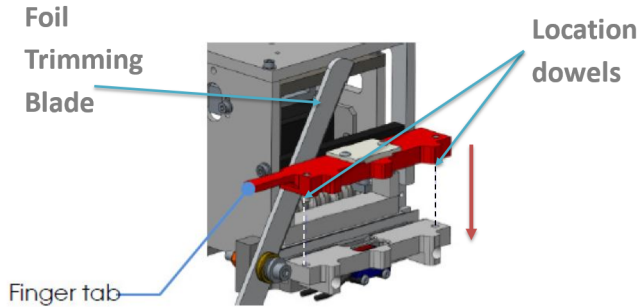


Figure 6. Aligning magnetic foil guide with receiving holes on the platform

2. Hold the finger tab on the Magnetic Foil Guide. Ensure the white reflector is facing up and the long flat edge faces towards the rear of the ALPS5000. Lower the Magnetic Foil Guide down onto the platform.
3. Ensure that both location dowels at either end of the Magnetic Foil Guide must align with the receiving holes on the platform. The magnet will secure the Foil Guide in place if positioned correctly.



CAUTION: The foil trimming blade is hazardously sharp. Do not extend any part of your hand farther than necessary into the ALPS5000 to place the foil guide onto its platform. HANDLE THE MAGNET FOIL GUIDE WITH THE FINGER TAB.

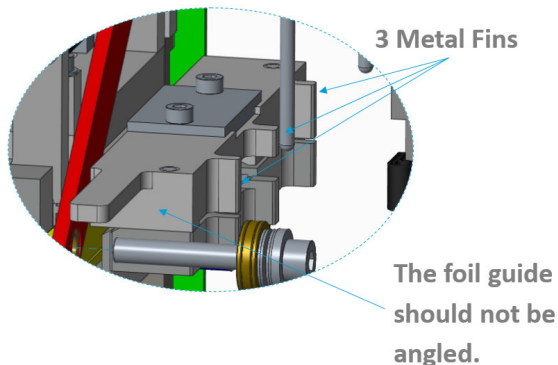


Figure 7. Fin Alignment

4. Check that the three metal fins on the foil guide align exactly with the corresponding fins on the platform. If they are misaligned, lift the foil guide up using the finger tab and attach again.

Packing List

Note: This packing list includes re-order numbers.

Check that your package contains the following items:

No.	Description	Thermo Fisher Part Number	Quantity
1	ALPS5000	AB-5000	1
2	Instruction manual	MNLALPS5000	1
3	Plate locators set of 3	AB5-067	1
4	Communication lead 4 metre	AB5-P311	1
5	Foil Spool w/ Clutch Assembly	AB5-A020	1
6	96 Well PCR Plate Support Adapter	AB-0563/1000	1
7	Excess Foil Removal Tool	AB5-094	1
8	mains lead U.K	N/A	1
9	mains lead U.S	N/A	1
10	E.U. mains lead	N/A	1
11	5 Amp anti-surge fuse	5050-10010	2
12	2.5 mm Allen key	2022-10008	1
13	Mains Lead China	N/A	1
14	Magnetic Foil Guide	AB5-A007	1

Principle of Operation

The unsealed plate is placed on a shuttle which extends from the front of the sealer, allowing full access with a robotic arm or stacking system. The shuttle is drawn into the unit automatically. The plate sealing operation will vary based on user settings & set sealing time. The shuttle thereafter returns the shuttle and the plate to its original start position.

The sealer can operate as a part of an automated system or in stand alone mode. Each roll of sealing film is sufficient for approximately five thousand plates. The cutting system cuts the film to cover the entire plate surface with a variable total length of 119 mm-128 mm allowing peelable or automation compatible applications. See **Figure 8** below.

The rolls of sealing film are either aluminum or clear laminates and are able to produce permanent, pierce-able or peel-able seals with polypropylene, polystyrene, polythene or COC plates.

To keep the size and weight to a minimum, the unit is fully electronic and all parameters such as temperature and time are fully adjustable to ensure a perfect, even seal with different plates and film formats.

User safety has been carefully considered during the design process to eliminate risk of contact with hot surfaces or the internal mechanism during operation.



Figure 8. 384 Well Sealed Plate.

Installation

The machine should be installed on a sturdy bench to avoid any vibration during operation. When locating the machine, there should be enough space allowed for the shuttle to move out without hitting anything or anybody.

The reduced weight compared to the previous model does make the ALPS5000 much easier to move into a suitable position.



CAUTION: Use appropriate lifting and carrying equipment available in the facility during unit movement from one place to another place. Also use any necessary PPE during unit movement.

Intended Use

ALPS5000 Plate Sealer is intended to be used for the heat-sealing of microplates during experimentation, storage or transportation. This device is not intended to be used as a Medical Device.

Operating Environment

Table 1. Operating Environment

Temperature Range	Operating	15°C to 40°C
	Storage	20°C to 40°C
Relative Humidity	Operating	10% to 80% Non condensing
	Storage	10% to 80% Non-condensing

The ALPS5000 should be operated in an environment with a temperature range between 15°C and 40°C and a non-condensing relative humidity range of 10% to 80%. The unit should be kept at least 4" from the side of walls, neighboring ALPS5000 units and furniture. The unit should not be placed adjacent to equipment that radiates heat that could impact the operating environment as listed in Table 1. The unit should be kept out of draught and air currents as they will have an adverse effect on the temperature stability of the sealing platen. The ALPS5000 will not seal if the temperature is not at the set temperature. So, if the sealing platen is subjected to draught, then the time between cycles may be increased.

The mains plug supplied with this unit is fitted with the following fuse:

Supply	Fuses fitted in Plug	Fuses fitted in rear inlet
230 V	13 Ampere	T5AH 250 V
115 V	No Fuses	T5AH 250 V

Only refit the correct type of fuse.

- Must be IEC 127 approved for use in EEC countries.
- Must be C.S.A. or UL listed or recognized for use in Canada or the United States of America.

Connecting the Voltage Supply

The ALPS5000 utilizes a standard IEC inlet which is fused and switched.

Note: The equipment will work at a minimum of 108 V to account for variation in supply when connected to nominal 115 VAC, and a maximum of 250 V when connected to nominal 240 VAC.



RS 232

Standard IEC inlet for mains connection

Figure 9. Connecting Voltage Supply

Insert standard IEE lead and connect to voltage supply switch on the rocker I=0 switch and check all guards are fitted.

The displays mounted on the front of the unit should illuminate with the Thermo Scientific logo.

Foil/Film Loading and Unloading

Standard Foils

The different types of foils that can be used include the Easy Peel, Clear Seal, Easy Pierce, and Easy Pierce Strong Foil Heat Seals.

Loading the ALPS5000 with Heat Sealing Film



CAUTION: We recommend that the unit should be cool when loading the film to eliminate possible injury.

The Electrical supply must be connected and switched on to allow automated priming of foil once loaded.

1. On power up, once Thermo Fisher splash screen appears and the unit is ready, press the Start Setup button to continue. ALPS5000 will initialize and default to the home screen. The screen may stay blank for 30 seconds to a minute when first powered up.
2. To load the foil, allow one turn of the roll of foil. This provides slack to feed through the unit.



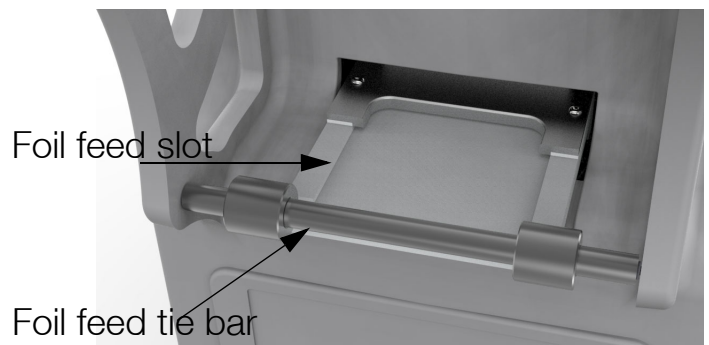
3. Navigate to the "Foil load" screen. Press **Load** to start the automatic foil engage process.
4. Loop foil under tie bar as shown, and up into the foil feed slot. Continue to manually feed foil until the automated

foil retention mechanism takes hold and mechanically pulls the foil into the machine.



CAUTION: Film will automatically feed through the system and the waste trimmed via the trim cycle, waste film must be removed with the tweezers supplied.

5. The ALPS5000 will automatically feed foil into the system until the internal sensors are reached. It will then continue to feed on a predetermined length of foil which is suitable for trimming and easy to reach. Press **Trim** which has now replaced the load button. Once the foil has been trimmed, the shuttle will extend from the unit to allow access into the machine and permits you to remove excess cut off length. This will ensure a straight first edge.



- Once the excess piece of foil has been removed from the machine, press Done to proceed as prompted. The unit will now prime itself ready for the first use.



CAUTION
Finger trap

CAUTION: Keep hands clear during priming process to avoid risk of finger entanglement and entrapment.



CAUTION: Always use supplied tweezers if it is required to remove foil. The heater block may be HOT.

- To unload foil at any time, navigate to the Load Foil Screen and press **Unload**. Foil will feed out from back of machine.

- Use tweezers provided to remove any miss cuts.



Figure 11. Removal of service panel

To gain further access to the machine via side service panel, use a 2.5 mm Allen key (provided) and remove the 4 screws as shown. Remove panel to reveal magnetic foil guide.

Adjusting the Foil Position

Centralizing of the foil on the plate

As supplied, the foil is set to be in the center of the plate. The position may be varied by 2 mm on either side of the centerline.

To make this adjustment, remove the foil and foil spool from the rear of the machine and loosen the stainless steel nut. This allows you to move the plastic nuts left to right, thus moving the foil left to right. When a satisfactory position is found, tighten the stainless steel nut and reload the foil.

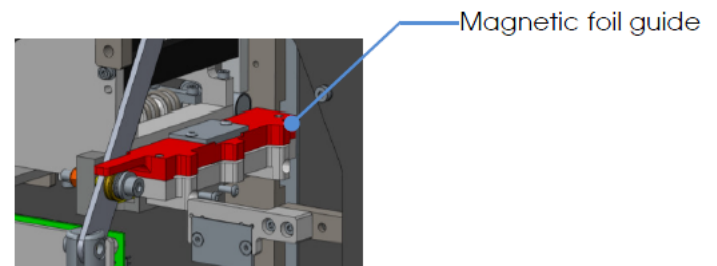


Figure 12. Magnetic Foil guide

Remove magnetic foil guide using the finger tab and get rid of any sliver or miss cuts of foil.

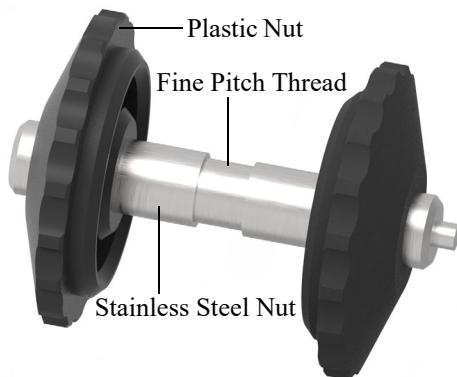


Figure 10. Centralizing of the foil

Seal 3-4 plates to let the foil settle in the center of the plate and check if the foil is centrally aligned. If this needs further adjustment, remove foil and adjust by loosening the stainless steel nut from the foil spool and winding the foil spool centrally.

To remove any miss cuts of foil from inside the ALPS5000:

- Use flat bladed screwdriver or similar object, rotate slot screw located on ALPS5000 door approximately 90° CCW. This will unlock and drop down front service panel to gain access to the main sealing area and front of the machine.

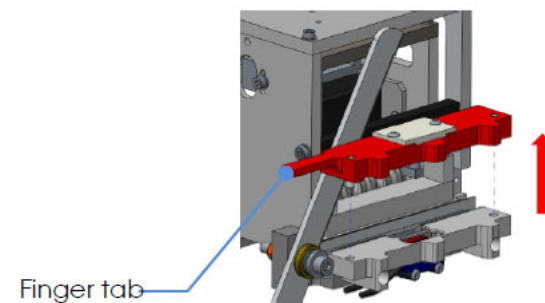


Figure 13. Finger Tab

Replace magnetic foil guide squarely in position on two location dowels. Replace service panel.



CAUTION
Finger trap
keep clear

CAUTION: This panel is not interlocked. Machine should be switched off and all power removed from the system before gaining access to side service panel.

Operation Procedure and Optimization

The ALPS5000 system has been designed to reliably seal plates of different heights and plastics, using a variety of films, to give a seal with varying properties, these components require different sealing conditions.

The quality and strength of the seal created between the sealing films will vary with different conditions. In general, increasing either the sealing temperature or duration of seal, gives a stronger, more complete seal. However, over-sealing on a regular basis is not recommended as applying more heat can cause damage and distortion to the plate being sealed. This in turn would reduce the number of times a particular plate can be re-sealed. Therefore a balance has to be achieved that gives an acceptable seal with the minimal plate damage.

Another optimization factor is the sealing surface area of the plate. A plate with thin raised rims around each tube will have a reduced surface area compared to a plate with wide raised rims. This means that less heat is needed to seal the thin rim plate in comparison to the wide rim.

The pressure that the heater plate exerts during sealing is adjustable using the **Force** setting on the home screen.

Alternatively the **Distance** setting can be used to control the amount of downward travel the heat sealing plate moves from the detected top of the plate independent.

Plates that do not have any raised rims are not usually suitable for heat-sealing.

Temperature and Time Settings

The following table gives a guide line of typical sealing time and temperature range for different materials.

Plate Material	Temperature Setting	Time Setting
Polystyrene	145°C - 165°C	1.0 Seconds - 3.0 Seconds
Polypropylene	150°C - 175°C	1.0 Seconds - 3.0 Seconds
Polyethylene	150°C - 170°C	1.0 Seconds - 3.0 Seconds

Commands, Indicators and Warnings

The ALPS5000 runs on an application software that is easily accessible using a touch screen. All commands, indications and warnings are relayed by the touch sensitive LCD Display Panel located on the front of the unit.

Setting the Sealing Operation

With a plate in position on the shuttle, the 'Start' segment is pressed to start the sealing operation. If the sealing plate is not up to temperature, the display will show that it is 'Heating' and the actual temperature compared to the set temperature.

The display flashes 'Sealing' during the operation and returns to the Home screen after sealing the plate and priming foil. The instrument is now ready for the next operation.

If there are any issues during the sealing operation, such as no plate present, a warning will be displayed.

ALPS5000 User Interface

Initial Set Up

Plug in the system to turn the power ON. Once the system is turned ON, ThermoScientific logo is displayed.

1. Select **Start** to initiate the setup process of the plate sealer.
2. The Home screen appears as shown below.



Figure 14. Start Setup

Main Screen

The main screen or home screen displays the setpoint temperature, time and distance or force of the set program on the plate sealer (Refer to figure 15).

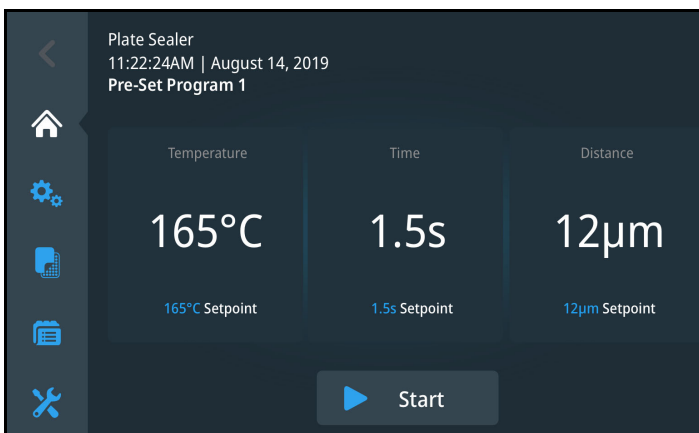


Figure 15. Main Screen

The various options available on the main screen are:

- The vertical panel on the left is the navigation bar that provides access to all functions of the unit.
- You can change the temperature, time and distance or force from the main screen.
- You can start the program you have set for the operation.

The navigation bar on the display has the following options:

- Home
- Settings
- Foil Load/Unload
- Programs
- Service

You can change the setpoint temperature from Home screen as given below. The minimum setpoint temperature is 35°C and maximum setpoint temperature is 199°C at 1°C adjustable temperature interval.

1. Tap on Temperature on the display. The following screen appears.

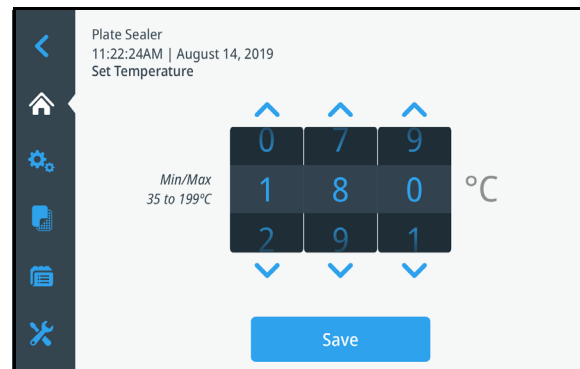


Figure 16. Set Temperature

2. Tap or press the up / down arrows to change the setpoint temperature.

Note: If you close the window without saving the changes, you will receive the following screen:

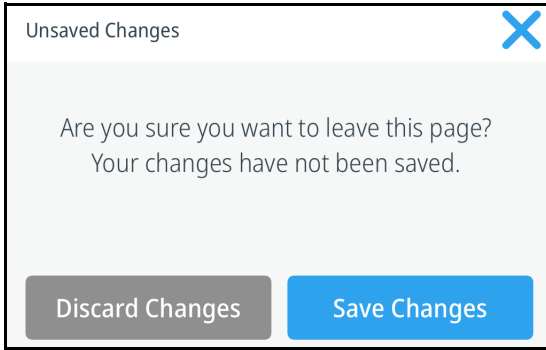


Figure 17. Unsaved Changes

Select **Discard Changes** if you do not wish to save the changes. Select **Save Changes** if you wish to confirm the changes you made.

3. Press **Save** to confirm the changes.

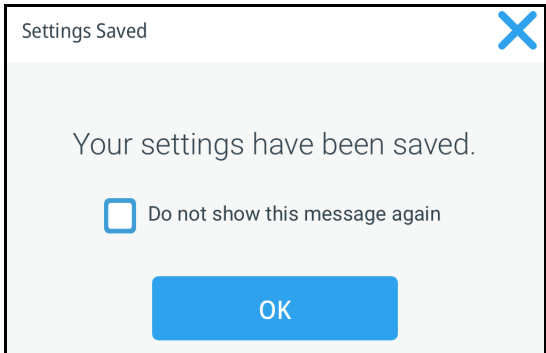


Figure 18. Settings Saved Confirmation

4. Click **OK**. You will receive a confirmation message that your settings have been changed.

To change the setpoint time on the Home screen, follow the steps given below. The minimum time interval is 0.5 seconds and maximum time interval is 9.9 seconds. The time interval can be adjustable in 0.1 second intervals.

1. Tap on Time on the display. The following screen appears.



Figure 19. Set Time

2. Change the setpoint time by tapping or pressing the up / down arrows.
3. Repeat step 3 and step 4 from the previous procedure to save the desired setpoint time.

To change the setpoint mode (Distance/Force depending on the mode the unit is set to) on the Home screen, follow the steps given below. The minimum sealing distance is 10 μm and maximum sealing distance is 50 μm with increments of 1 μm .

1. If you wish to set Distance as setpoint mode, tap on Distance on the display. The following screen appears:

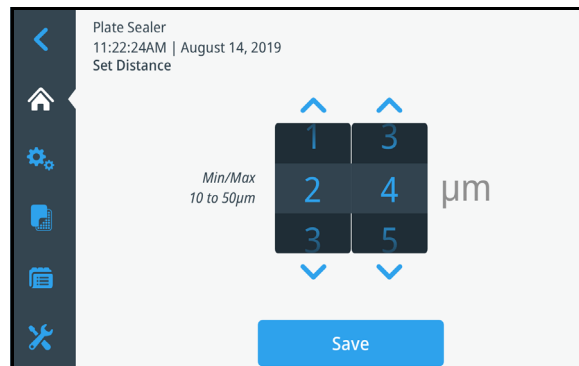


Figure 20 a. Set Distance

2. If you wish to set Force as setpoint mode, tap on Force on the display. The following screen appears. The minimum sealing force you can apply is 5 kg and maximum sealing force is 50 kg with adjustable force of 1 kg increments. This setting may need to be re-entered if the unit loses power.

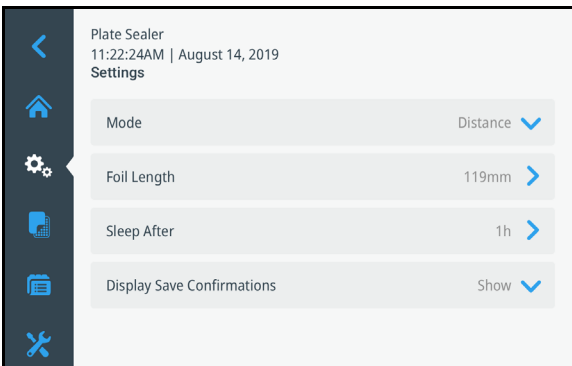


Figure 20 b . Set Force

3. Change the setpoint mode (distance/force) by tapping or pressing the up / down arrows.
4. Repeat step 3 and step 4 from the previous procedure to save the desired setpoint mode (distance/force).

Settings

The second tab on the navigation panel is the Settings icon. The following screen is displayed when you select the Settings icon. This screen allows you to configure or edit the type of mode, foil length, and sleep after time interval.



Mode

The mode settings allows you to toggle between Distance or Force. The distance is measured in Micrometer (μm) and Force is measured in Kilograms (Kg).

To change the mode settings:

1. Tap on **Mode** to select Force/Distance from the drop down.

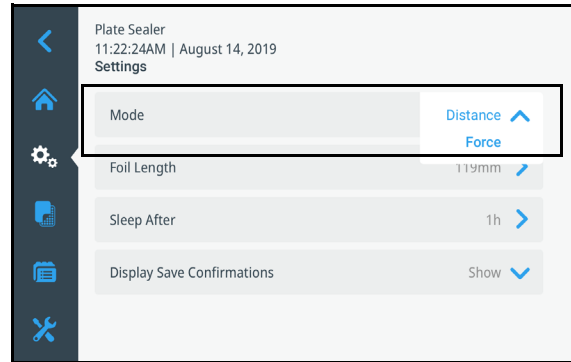


Figure 21. Mode Settings

2. Click **Save** to save your settings.



Figure 22. Save Mode

3. You will receive the following confirmation message that your settings have been saved. Click OK.

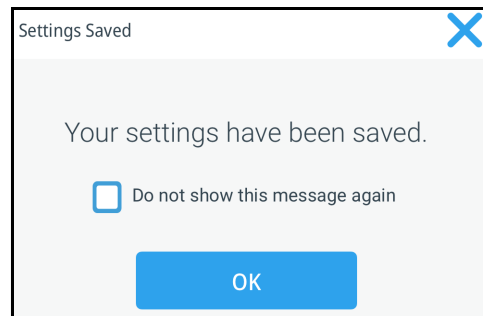
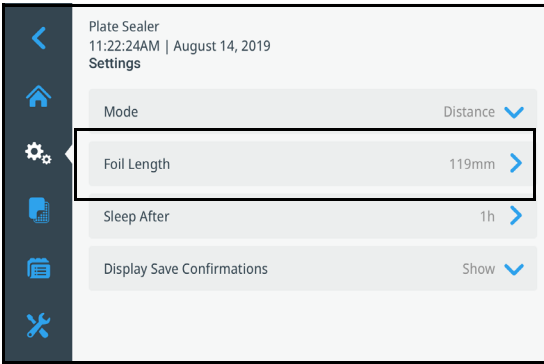


Figure 23. Settings Saved

Foil Length

The foil length allows to set a minimum foil length 119 mm and a maximum foil length of 128 mm in increments of 1 mm. To set the desired foil length:

1. Tap on Foil Length from Settings.



2. Select the length of the foil.
3. Click **Save**. You will receive a confirmation message that your settings have been saved.
4. Click OK. The foil length is configured.

Sleep after

Sleep after is the idle time out that the unit is unattended. This allows you to set time duration for the unit to go into sleep mode due to the unproductive time that a unit is not being used. The minimum sleep after time you can set is for 1 hour and the maximum time for the unit to be in sleep after mode is 24 hours. To set or change the sleep after time:

1. Tap on **Sleep After** to configure the sleep after time.
2. Select the duration that you wish to configure. Select duration that you wish to configure, a value of 0 will disable the sleep feature.
3. Click **Save**. You will receive a confirmation message that your settings have been saved.
4. Click OK. The sleep after time is set.

Eco Mode

The Eco mode is a power saver setting that allows the user to set a time (in hours) for the system to be active. The system goes into sleep mode after the selected time expires.

The heater will reduce to a set temperature to save electricity. Select **Wake** or any navigation button on the left to return to the home page. This setting may need to be re-entered if the unit loses power

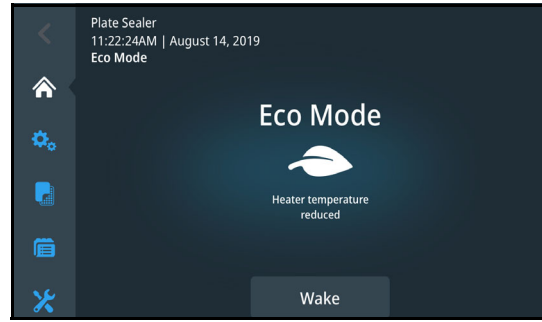




Figure 24. Eco Mode

Loading/Unloading a Foil


The third tab on the navigation panel is the Foil Load  icon. The following screen will be displayed when you select the  icon.

The loading/unloading allows you to load a new foil or unload an existing foil.

Loading a Foil

When you want to load a foil, the instrument senses no foil.

To load a foil:

1. Select . The following screen appears describing the process to load a new foil:

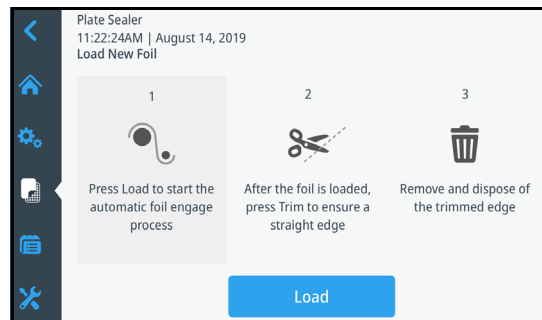


Figure 25. Load New Foil

2. Select **Load**. The machine starts automatic foil engage process.
3. Once the foil is ingested, select **Trim** to ensure a straight edge.

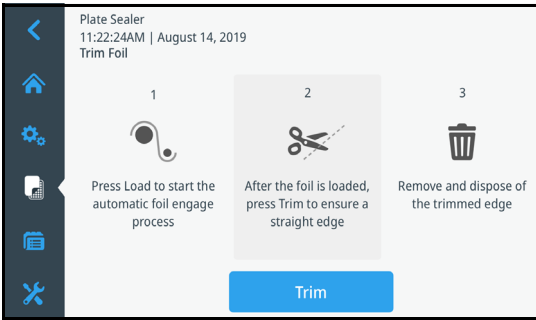


Figure 26. Trim Foil

4. Remove the trimmed section of foil and select **Done**. Dispose the trimmed edge.

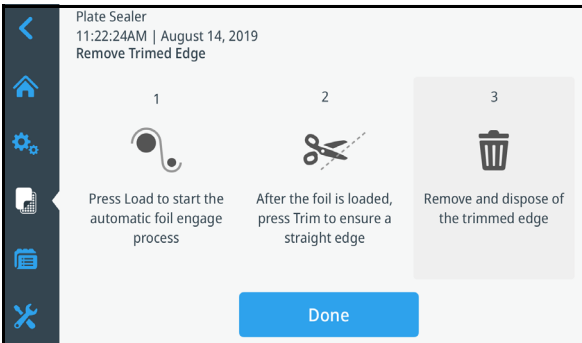


Figure 27. Removal and disposal of trimmed edge

When you want to unload a foil, press **Unload** to eject the foil. Machine ejects foil and displays load page.

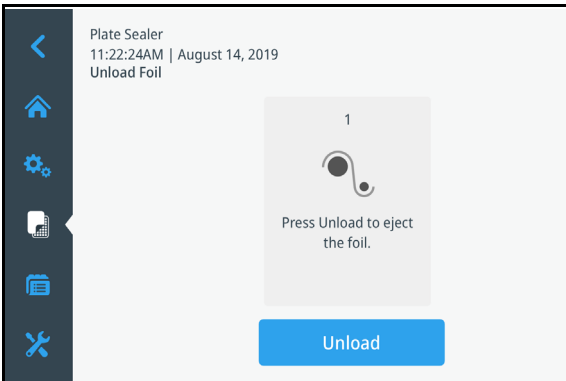
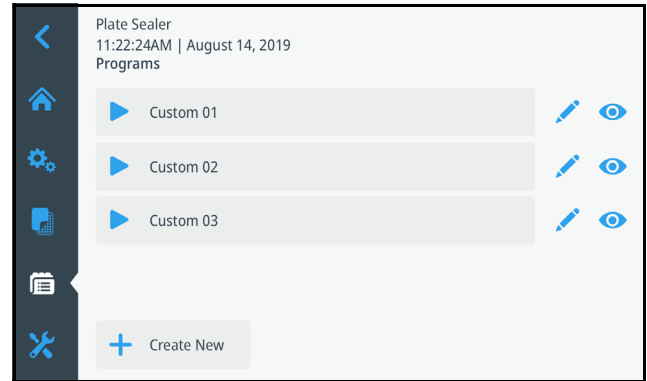


Figure 28. Unload Foil

Programs

The programs tab allows you to view, edit and create the load parameters of a program.



Viewing a Program

1. Select Programs from the navigation menu and a list of configured programs are displayed.
2. Select the eye icon for a quick program view of the program details.

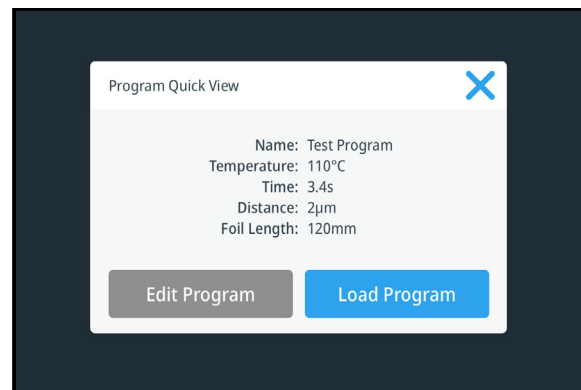


Figure 29. Program Quick View

3. You may load or edit the program as required.

Note: If there are no programs created, click **+ Create New** to create a program.

Create New Program

This enables you to create a new program.

1. Select **+ Create New** on the Programs screen.
2. Tap on the Name field to enter the name using the keypad.

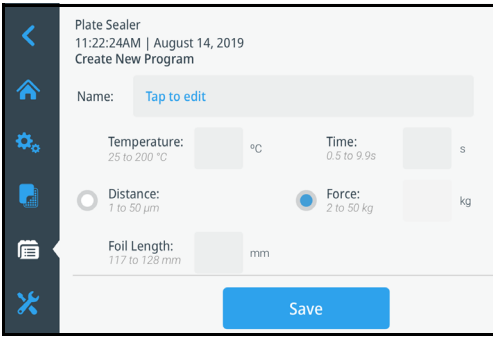


Figure 30. Enter Name of the Program

3. Enter the temperature and time within the range specified on the screen. Choose distance or force as mode depending on your choice. Enter the values within the range given on the display.

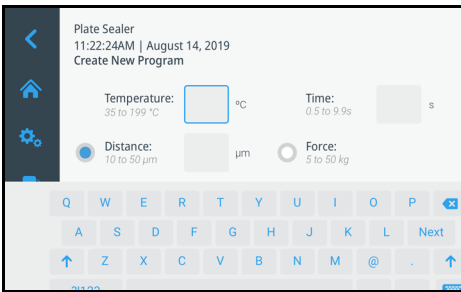


Figure 31. Enter Values

Note: If you enter a value that is not within the range given, the field in which the incorrect value is entered is highlighted.

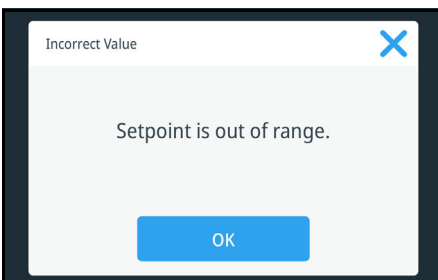


Figure 32. Incorrect Value Entered

4. Click Save. The following screen appears.

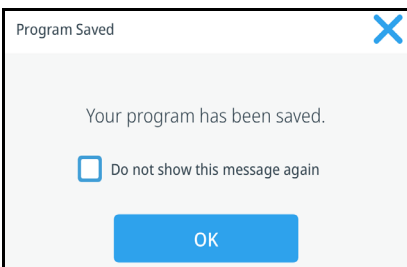


Figure 33. Settings Saved

Note: If you close the window without saving the changes, you will receive the following message. If you do not wish to save the programs, select **Discard Changes**. Select **Save Changes** if you wish to save the program.

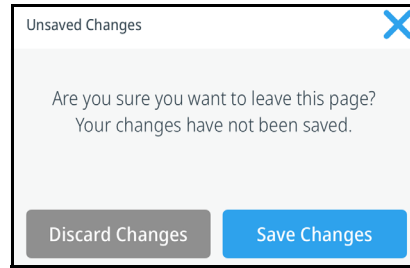



Figure 34. Unsaved Changes

5. Click OK. The program is saved.

Editing a Program

The pencil icon  allows you to edit an existing program.

1. Select the program you want to edit. The edit program screen is displayed.

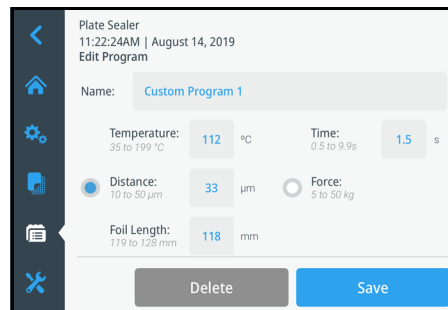


Figure 35. Edit Program

2. Make the required changes and click Save. Click Delete if you want to delete a program.

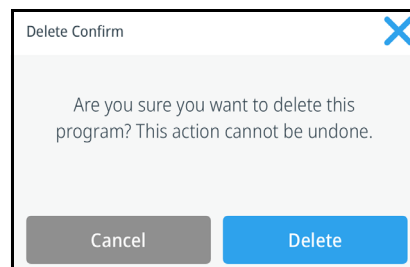


Figure 36. Delete Confirm

3. Click OK. The programs screen is displayed.

Service


Select  icon if you require any assistance or support. For contact details, see the following screen.



Figure 37. Contact Information

ALPS5000 Host Communication Protocol

Serial Port Setup

Table 2. Serial Port Setup

Baud rate 9600	9600
Data bits 8	8
Parity None	None
Stop bits 1	1
Flow control None	None

All communications via ASCII.

Cable

Connection is via a straight cable – not a null-modem cable.

PC (9 way female) ALPS5000 (9 way female)

Pin 2 <-----> Pin 2

Pin 3 <-----> Pin 3

Pin 5<-----> Pin 5

Message Response time

The unit responds to each message within 150 milliseconds.

System Initialisation

The system will only initialise once the init command has been sent.

PC sends I<cr>
ALPS5000
replies: ok<cr>

Status Message

PC sends ?<cr>
ALPS5000
replies: <status byte><cr>

The status byte is a hexadecimal value represented in ASCII, i.e. the characters "ff" means 0xff hex.

The bit values are given in the table below:

Table 3. Bit Values

bit 0	No Foil
bit 1	Error
bit 2	Busy
bit 3	Not At Seal Temperature
bit 4	Plate Not Present
bit 5	Not Initialised
bit 6	Force Sensor activated (To be added)
bit 7	Park Mode (To be added)

When checking the communication using, for example Hyper-terminal, the responses to the status message inquiry are hexadecimal values which when converted to binary values allow the status to be interpreted. For example, when the unit is heating or cooling and so not at the sealing temperature, the response is 08. In binary this is 1000.

Taking the bit values from 0-7 from the right bits 3 is at 1.

The status is 'not at seal temperature' as listed above.

Seal Plate Command

PC sends S<cr>
ALPS5000
replies: ok<cr>

If the sealing operation has commenced

or err<cr>

If it is unable to seal the plate.

The ALPS5000 will not seal the plate if the following conditions exist:

Table 4. Status

bit 0	No Foil
bit 1	Error

Table 4. Status

bit 2	Busy
bit 3	Not At Seal Temperature

Error Message

PC sends E<cr>

ALPS5000 ##<cr> where ## is a decimal value
 replies: represented in ASCII, i.e. the characters "01"
 means error

Table 5. Error Numbers

ERROR	VERTICAL_SHUTTLE_DOWN	1
ERROR	HEATER_UP	2
ERROR	SHUTTLE_IN	3
ERROR	CUTTER	4
ERROR	THERMOCOUPLE	5
ERROR	OVERHEATING	6
ERROR	NO_FOIL	7
ERROR	NO_PLATE	8
ERROR	FORCE_SENSOR	9

Sealing Temperature message

PC sends A###<cr> where ### is a 3 digit decimal
 number represented in ASCII, i.e. the string
 A180<cr> sets the sealing temperature to
 180 deg C.

ALPS5000 ok<cr>
 replies:

Sealing Time message

PC sends B##<cr> where ## is a 2 digit decimal
 number represented in ASCII, i.e. the string
 B25<cr> sets the sealing time to 2.5
 seconds.

ALPS5000 ok<cr>
 replies:

To read back the actual temperature value

PC sends C<cr> where ### is a 3 digit decimal number
 represented in ASCII, i.e. the string 170<cr>
 means the current set point is 170 degrees
 centigrade.

ALPS5000 ###<cr>
 replies:

To read back sealing time

PC sends D<cr>

ALPS5000 ##<cr> where ## is a 2 digit decimal number
 represented in ASCII in units of 10ths of a
 second i.e. the string 25<cr> means the
 current sealing time is 2.5 seconds.

To read back sealing temperature actual value

PC sends F<cr>

ALPS5000 ###<cr> where ### is a 3 digit decimal
 number represented in ASCII, i.e. the string
 170<cr> means the actual value is 170
 degrees centigrade.

To enable Force sensor sealing

PC sends FS=1<cr>

ALPS5000 ok<cr>
 replies:

To disable Force sensor sealing

PC sends FS=0<cr>

ALPS5000 ok<cr>
 replies:

To set sealing force pressure

PC sends PS=50<cr> Where pressure is in 1 Kilo
 increments (range 5 – 50Kg)

ALPS5000 ok<cr>
 replies:

To read sealing force pressure

PC sends PS<cr>

ALPS5000 ##<cr> where ## is a 2 digit decimal number
 represented in ASCII

To set seal length

PC sends L=120<cr> Where length is 1 mm increments
(range 119 – 128 mm)

ALPS5000 ok<cr >
replies:

To read seal length

PC sends SL<cr>

ALPS5000 # ##<cr> where ### is a 3 digit decimal
replies: number represented in ASCII

To read back drive on distance

PC sends DO<cr>

ALPS5000 ###<cr> where ### is a decimal number
replies: represented in ASCII the distance the drive on
will move i.e. the string 25<cr> means the
current drive on is 0.25mm

To set the drive on distance

PC sends DO=##<cr> where ## is a decimal number
represented in ASCII the distance the drive on
will move i.e. the string DO=25<cr> sets the
current drive on to 0.25mm

ALPS5000 ok<cr>
replies:

To move the plate shuttle inside the ALPS5000

PC sends SI<cr>

ALPS5000 ok<cr>
replies:

To move the plate shuttle out to the load position

PC sends SO<cr>

ALPS5000 ok<cr>
replies:

To read the current software version for the ALPS5000

PC sends V<cr>

ALPS5000 ALPS5000_Version: V_1.033G_GP
replies: Build_Date: 15_01_2019_14:11

Specifications of ALPS5000

Table 6. Specifications

Power Supply	115 VAC / 230VAC 50/60Hz
Maximum Power Consumption	378W at 110v / 60Hz, 500W at 240V / 50Hz, 8W Eco Mode
Fuse Rating	5 Amp anti-surge (T5AH 250V)
Internal Heaters	4 x 100 Watts (Sealing Plate)
Dimensions (mm)	232 x 518 x 506 (W x H x D)
Weight	25 Kg
Minimum Operating Ambient Temperature	15°C
Maximum Operating Ambient Temperature	40°C
Minimum Sealing Plate Height	7 mm
Maximum Sealing Plate Height	46 mm
Maximum Sealing Temperature	199°C
Protection	IP20 (per IEC 60529)
Fire Retardancy	Plastic Case & Trays ECCEN 6073
Pollution Degree	2
Overtoltage Category	II
Altitude	Upto 2000 m

Maintenance



Before using any cleaning or decontamination method, other than that recommended by the manufacturer, users should check with the manufacturer that the proposed method will not damage the unit.



In case of radioactive spillage's, Thermo Fisher Scientific, recommend that you use a proprietary cleaning agent and follow the manufacturer's instructions. You may clean the ALPS5000 cover, with a cloth dipped in water or ethanol, methanol or formaldehyde may also be used.



The unit should not be immersed in solvents.



Do not use acetone or abrasive cleaners.

Cleaning the Heater Block

The 'Teflon' coated heater block should only be cleaned with a clean dry cloth when the unit is switched off and the heater block has cooled down to ambient temperature.

Any plastic which has melted onto the block during operation, should be solid at ambient temperature and can be removed with a clean dry cloth. Take care not to damage the surface of the heater block.

Do not use any abrasive materials to clean the heater block as this will damage the non-stick coating.

Troubleshooting

Note: This equipment should only be dismantled by a trained personnel. Removing the main cover exposes potentially lethal mains voltages.

The ALPS5000 System has been designed to give long term reliability with the minimum of maintenance.

Should a problem occur with the sealing, an initial inspection of the component may identify its cause and the necessary action to be taken. The following list highlights potential faults and the course of action to take.

Table 7. Troubleshooting

Fault	Cause	Action
Display is blank when powered on	ALPS5000 still initializing	Wait for up to minute
Doesn't cut properly	Cutting die setting problem	Call for service
No foil error.	No foil	Reload foil
Unit doesn't seal properly	Time or temperature setting incorrect.	Change sealing parameters.
Poor sealing	Unsuitable plate. No plate support or incorrect plate support.	Fit correct plate support. If no improvement call for service.
Display shows shuttle error in/out	Foil jammed in machine.	Remove foil. If none found, call for service
External fuse blows fuse life	Fuse life has expired	Replace and if it fails again call for service.
Display shows error not up.	Faulty Switch	Call for service.
Unit fails to power up	Fuse has blown	Turn machine on. Replace Fuse and if it fails again call for service.
The display shows 'thermocouple error'	Faulty thermocouple	Call for service.

Preparing ALPS5000 for Shipment

Transit Plate

The ALPS5000 is shipped with a transit plate installed internally to protect the instrument from damage during shipping. The transit plate is stowed within the ALPS5000 for normal operation and is positioned convenient for shipping via thumb screws and a cable-tie to secure foil guide to the transit plate, once in position. Positioning the transit plate should only be done with power removed from the ALPS5000 and having given it enough time for the heat platen to completely cool. The transit plate must be positioned and cable tie must be used to secure the movable foil guide to protect the instrument during shipping.



Figure 38. Unlock front service panel



CAUTION: This panel is not interlocked. Machine should be switched off and all power removed from the system before gaining access to the front service panel.

Use flat bladed screwdriver or similar object, rotate slot screw located on the ALPS5000 door, approximately 90° CCW. This will unlock and drop the front service panel down to gain access to the main sealing area and front of the machine.

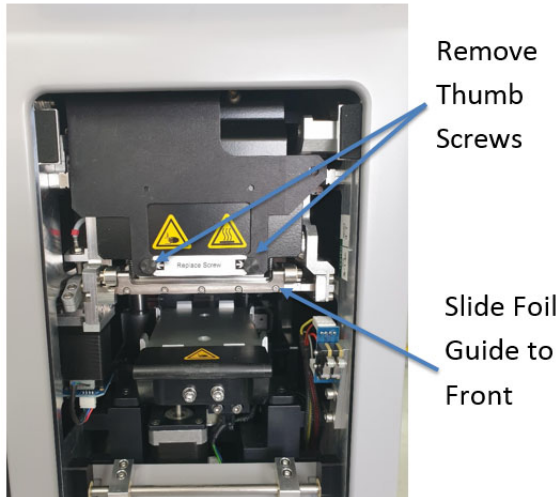


Figure 39. Remove thumb screws and slide foil guide

Make sure the movable foil guide is slides forward towards the front of the instrument. If it is not, reach into the ALPS5000 and draw it forward. The transit plate is secured onto the ALPS5000 with two thumb screws. Unscrew and remove the screws. Do not drop the transit plate or thumb screws into the ALPS5000.

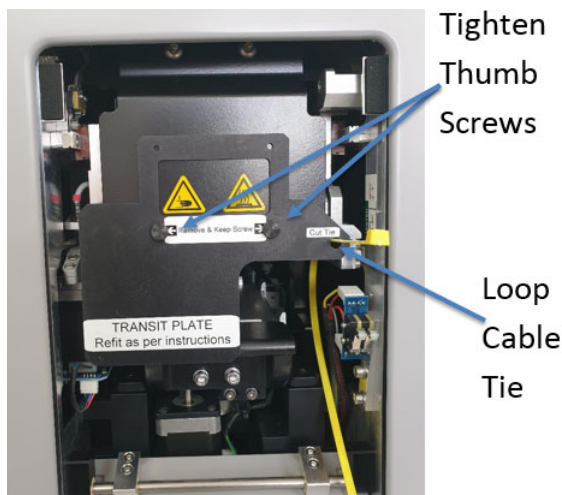


Figure 40. Secure transit plate and movable foil guide with cable tie

Flip the transit plate vertically such that the other side of the plate is facing forward and the cable tie hole aligns to allow you to secure the movable foil guide to the transit plate with a cable tie.

Slightly bend the provided cable tie, and feed through the unit. If the cable tie (or a portion of the cable tie) falls into the unit, carefully retrieve it and remove from the unit prior to operation. Make sure the cable tie is securing the foil to the transit plate to prevent damage during transport.

Raise the front service panel back in to place and turn the slot screw approximately 90 degrees clockwise to secure the panel in place.

Magnetic Foil Guide

The Magnetic foil guide should also be removed prior to shipping to prevent internal damage to the ALPS5000 from it coming loose. To do this, the side service panel must be removed. Turn off the system before you remove the magnetic foil guide.



Figure 41. Removing service panel

To gain further access to the machine via the side service panel, use 2.5mm Allen key and remove the 4 screws as shown. Remove panel to reveal the magnetic foil guide.

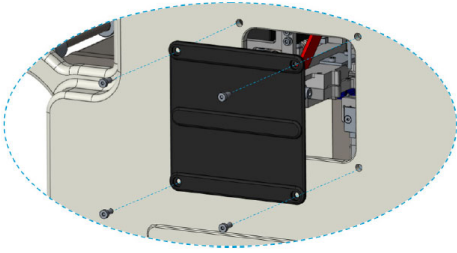


Figure 42. Removing panel to reveal magnetic foil guide



CAUTION: This panel is not interlocked. Machine should be switched off and all power removed from the system before gaining access to side service panel.

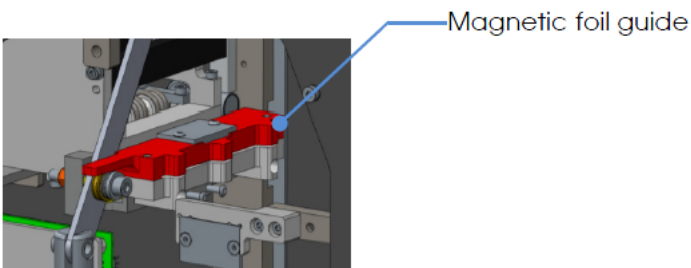


Figure 43. Magnetic Foil Guide

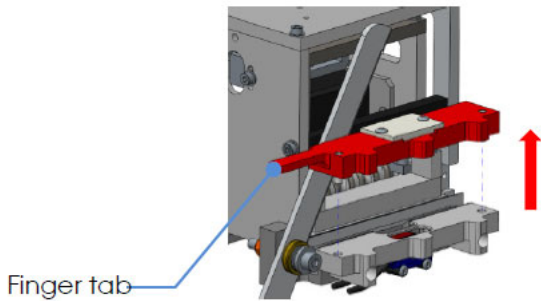


Figure 44. Finger Tab

Remove Magnetic Foil Guide by lifting the finger tab upwards to clear it from the magnets and removing from the instrument. Place in the Ziploc bag and keep with the ALPS5000 when it is shipped.

Regulatory Information

Product Safety

Product Testing

This product family has been tested to applicable product safety standards by Underwriters Laboratories (UL), which is a Nationally Recognized Test Laboratory (NRTL). The product bears the following mark.



EMI/EMC

US EMC Testing

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canada EMC Testing

CAN ICES-1/NMB-1

China RoHS Declaration

Below is the China EEP Hazardous Substances Information table.

Table 8. 产品中有害物质的名称及含量 China EEP Hazardous Substances Information

Thermo Fisher Scientific ALPS 5000						
部件名称 Component Name	有害物质 Hazardous Substances					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB) Polybrominated biphenyls	多溴二苯醚 (PBDE) Polybrominated diphenyl ethers
金工 Metal Parts	0	0	0	0	0	0
塑料 Plastic Parts	0	0	0	0	0	0
显示器 Display	0	0	0	0	0	0
电缆 Cabling	0	0	0	0	0	0
电路板 PCBA's	0	0	0	0	0	0
标签 Labels	0	0	0	0	0	0
本表格依据 SJ/T 11364 的规定编制 This table is compiled according to SJ/T 11364 standard.						
0: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。 Indicates that the concentration of the hazardous substance in all homogeneous materials for the part is below the relevant threshold of the GB/T 26572 standard.						
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要。 Indicates that the concentration of the hazardous substance in at least one homogenous material of the part is above the relevant threshold of the GB/T 26572 standard.						

The China EEP Hazardous Substances Information table is available at <https://www.thermofisher.com/in/en/home/technical-resources/rohs-certificates.html>

CE Declaration

ThermoFisher
SCIENTIFIC

The world leader in serving science

Laboratory Products Division



[1] Manufacturer

Nalge Nunc International, a part of Thermo
Fisher Scientific Inc.
75 Panorama Creek Dr.
Rochester, NY 14625
United States of America (USA)

[2] Authorized Representative

Thermo Electron LED GmbH
Robert-Bosch-Str. 1
63505 Langenselbold
Germany

[3] Product Type

Automated Laboratory Heat Sealer

[4] Model Name(s) and [5] Rated Voltage, Rated Frequency

Model Name [4]	Rated Voltage [5]	Frequency (Hz) [5]
ALPS5000	110-240 VAC	50Hz - 60Hz

[6] The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

[7] EC Directives

2014/30/EU Electromagnetic Compatibility Directive
2014/35/EU Low Voltage Directive
2011/65/EU RoHS 2 Directive
2015/863 RoHS 2 Directive Amendment
2006/42/EC Machinery Directive

[8] The object of the declaration described above is in conformity with Directive 2011/65/EU and 2015/863 of the European Parliament and of the Council of 22 July 2019 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

[9] Standards

EN 61326-1:2013
EN 61010-1: 2010
EN 50581:2012
EN ISO 12100:2010

[10] This declaration is valid from the product manufactured after the date: April 1, 2020.

Janet Cosgrove
Regulatory Affairs Manager
LSG - Laboratory Products Division
Nalge Nunc International, a Part of
Thermo Fisher Scientific Inc.



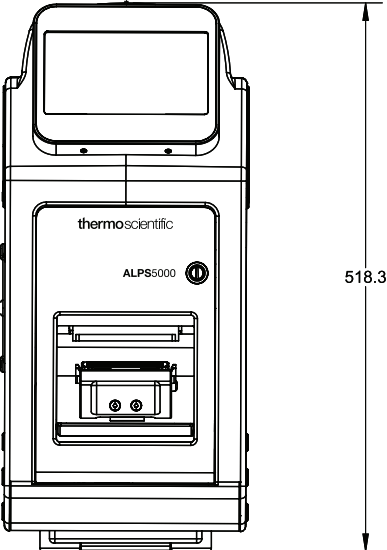
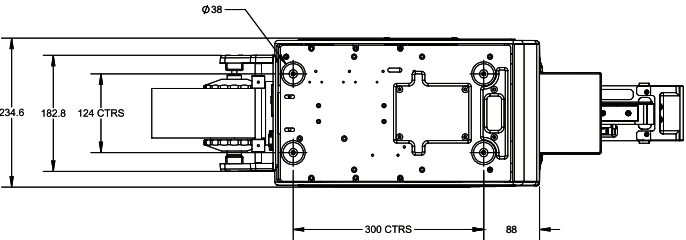
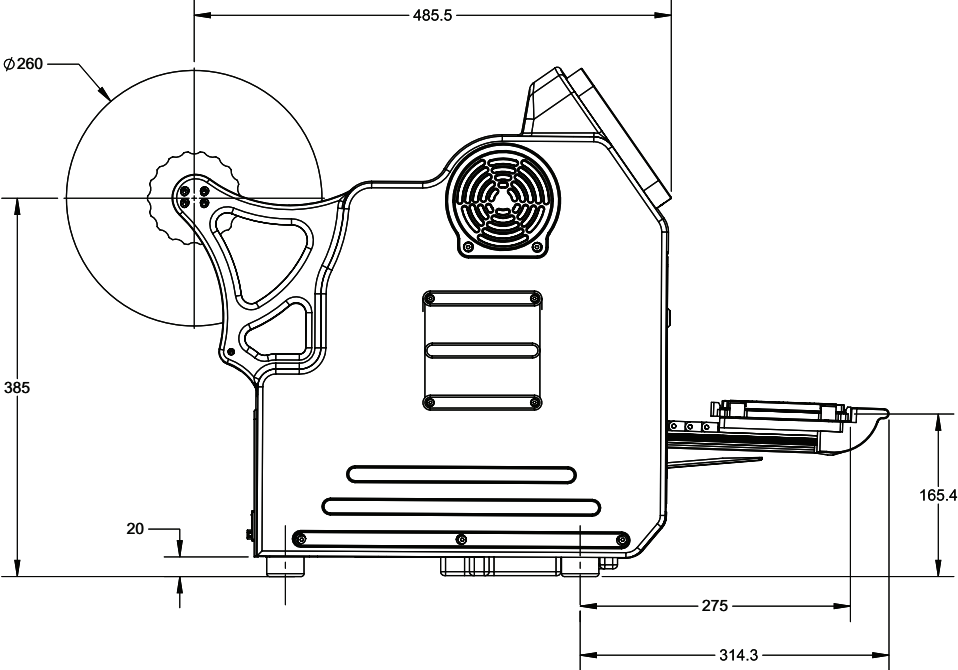
<p>DE ^[1] Hersteller - ^[2] Bevollmächtigter Vertreter - ^[3] Produkttyp - ^[4] Modellbezeichnung(en) - ^[5] Nennspannung, Nennfrequenz - ^[6] Der oben beschriebene Gegenstand der Erklärung erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union.: ^[7] EG-Richtlinien - ^[8] Der oben beschriebene Gegenstand der Erklärung erfüllt die Vorschriften der Richtlinie 2011/65/EU und 2015/863 des Europäischen Parlaments und des Rates vom 22. Juni 2019 zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten: ^[9] Normen - ^[10] Diese Erklärung gilt für die nach diesem Datum hergestellten Produkte. ^[10] Diese Erklärung gilt für das Produkt mit folgender Seriennummer und Herstellungsdatum</p>
<p>FR ^[1] Fabricant - ^[2] Représentant agréé - ^[3] Type de produit - ^[4] Désignation(s) du modèle - ^[5] Tension nominale, Fréquence nominale - ^[6] L'objet de la déclaration décrit ci-dessus est conforme à la législation d'harmonisation de l'Union applicable : ^[7] Directives européennes - ^[8] L'objet de la déclaration décrit ci-dessus est conforme à la directive 2011/65/UE et 2015/863 du Parlement européen et du Conseil du 22 juin 2019 relative à la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques. ^[9] Normes - ^[10] La présente déclaration est valable à partir de la date de fabrication du produit. ^[10] La présente déclaration est valable pour le produit portant le numéro de série et la date de fabrication suivants.</p>
<p>IT ^[1] Produttore - ^[2] Rappresentante autorizzato - ^[3] Tipo di prodotto - ^[4] Nomi dei modelli - ^[5] Tensione nominale, Frequenza nominali - ^[6] L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione ^[7] Direttive CE - ^[8] L'oggetto della dichiarazione di cui sopra è conforme alla direttiva 2011/65/UE e 2015/863 del Parlamento europeo e del Consiglio dell'22 giugno 2019, sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche ^[9] Standard - ^[10] Questa dichiarazione è valida dal prodotto costruito dopo la data. ^[10] Questa dichiarazione è valida per il prodotto con i seguenti numero di serie e data di produzione</p>
<p>ES ^[1] Fabricante - ^[2] Representante autorizado - ^[3] Tipo de producto - ^[4] Modelos - ^[5] Tensión nominal, Frecuencia nominal - ^[6] El objeto de la declaración descrita anteriormente es conforme con la legislación de armonización pertinente de la Unión: ^[7] Directivas CE - ^[8] El objeto de la declaración descrito anteriormente es conforme a la Directiva 2011/65/UE y 2015/863 del Parlamento Europeo y del Consejo, de 22 de junio de 2019, sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos ^[9] Normas - ^[10] Esta declaración es válida para el producto fabricado después de la fecha. ^[10] Esta declaración es válida para el producto con el siguiente número de serie y fechade manufactura.</p>
<p>PT ^[1] Fabricante - ^[2] Representante Autorizado - ^[3] Tipo de Produto - ^[4] Nome(s) do Modelo - ^[5] Tensão Nominal, Frequência Nominal - ^[6] O objeto da declaração acima descrito está em conformidade com a legislação de harmonização da União aplicável: ^[7] Directivas da CE - ^[8] O objecto da declaração acima mencionada está em conformidade com a Directiva 2011/65/UE e 2015/863 do Parlamento Europeu e do Conselho, de 22 de Junho de 2019, relativa à restrição do uso de determinadas substâncias perigosas em equipamentos eléctricos e electrónicos. ^[9] Normas - ^[10] Esta Declaração é válida para o produto fabricado após a data. ^[10] Esta Declaração é válida para o produto com o seguinte número de série e data de fabrico</p>
<p>NL ^[1] Producent - ^[2] Gemachtigd vertegenwoordiger - ^[3] Producttype - ^[4] Modelnaam/namen - ^[5] Nominale spanning, nominale frequentie - ^[6] Het hierboven beschreven voorwerp is in overeenstemming met de desbetreffende harmonisatiewetgeving van de Unie: ^[7] EC-richtlijnen - ^[8] Het hierboven beschreven voorwerp is conform Richtlijn 2011/65/EU en 2015/863 van het Europees Parlement en de Raad van 22 juni 2019 betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur: ^[9] Normen - ^[10] Deze verklaring is geldig voor de producten die zijn geproduceerd na deze datum. ^[10] Deze verklaring is geldig voor het product met het volgende serienummer en productiedatum.</p>
<p>PL ^[1] Producent - ^[2] Autoryzowany Przedstawiciel - ^[3] Typ produktu - ^[4] Nazwa(y) modelu - ^[5] Napięcie znamionowe, częstotliwość znamionowa - ^[6] Wymieniony powyżej przedmiot niniejszej deklaracji jest zgodny z odpowiednimi wymaganiami unijnego prawodawstwa harmonizacyjnego: ^[7] dyrektywy KE - ^[8] Opisany powyżej przedmiot deklaracji jest zgodny z dyrektywą Parlamentu Europejskiego i Rady 2011/65/UE oraz 2015/863 z dnia 22 lipca 2019 r. w sprawie ograniczenia stosowania niektórych niebezpiecznych substancji w sprzęcie elektrycznym i elektronicznym: ^[9] Standardy - ^[10] Deklaracja ta jest ważna dla wyrobów wyprodukowanych po dacie. ^[10] Niniejsza deklaracja jest ważna dla produktu z następującym numerem seryjnym oraz datą produkcji.</p>
<p>CS ^[1] Výrobce - ^[2] Autorizovaný zástupce - ^[3] Typ produktu - ^[4] Názvy modelů - ^[5] Jmenovité napětí, jmenovitý kmitočet - ^[6] Výše popsáný předmět prohlášení je ve shodě s příslušnými harmonizačními právními předpisy Unie: ^[7] Směrnice ES - ^[8] Výše popsáný předmět prohlášení je ve shodě se směrnicí Evropského parlamentu a Rady 2011/65/EU a 2015/863 ze dne 22. června 2019 o omezení používání některých nebezpečných látek v elektrických a elektronických zařízeních: ^[9] Normy - ^[10] Toto prohlášení o shodě platí od data výroby produktu. ^[10] Toto prohlášení o shodě platí pro produkt s následujícím výrobním číslem a datem výroby.</p>

<p>SK ^[1] Výrobca – ^[2] Autorizovaný zástupca – ^[3] Typ produktu – ^[4] Názov modelu(-ov) – ^[5] Menovitá napätie, menovitá frekvencia – ^[6] Uvedený predmet vyhlásenia je v zhode s príslušnými harmonizačnými právnymi predpismi Únie: ^[7] Smernice ES – ^[8] Vyššie opísaný predmet vyhlásenia je v zhode so smernicou Európskeho parlamentu a Rady 2011/65/EÚ a 2015/863 z 22. júla 2019 o obmedzení používania určitých nebezpečných látok v elektrických a elektronických zariadeniach : ^[9] Normy – ^[10] Toto vyhlásenie platí pre produkty vyrobené po uvedenom dátume. ^[10] Toto vyhlásenie platí pre produkty s nasledujúcim sériovým číslom a dátumom výroby.</p>
<p>DA ^[1] Producent - ^[2] Autoriseret repræsentant - ^[3] Produkttype - ^[4] Modelnavn(e) - ^[5] Vurderet spænding, vurderet frekvens – ^[6] Genstanden for erklæringen, som beskrevet ovenfor, er i overensstemmelse med den relevante EU-harmoniseringslovgivning: ^[7] EU-direktiver - ^[8] Genstanden for erklæringen, som beskrevet ovenfor, er i overensstemmelse med Europa-Parlamentets og Rådets direktiv 2011/65/EU og 2015/863 af 22. juli 2019 om begrænsning af anvendelsen af visse farlige stoffer i elektrisk og elektronisk udstyr: ^[9] Standarder - ^[10] Denne bekendtgørelse er gyldig fra produktet fremstillet efter denne dato. ^[10] Denne bekendtgørelse er gyldig for produktet med det følgende serienummer og fremstillingsdato</p>
<p>SV ^[1] Tillverkare - ^[2] Auktoriserad representant - ^[3] Produkttyp - ^[4] Modellnamn - ^[5] Märkspänning, märkfrekvens – ^[6] Hänvisningar till de relevanta harmoniserade standarder, inklusive datum för standarden, som använts eller hänvisningar till de andra tekniska specifikationer, inklusive datum för specifikationen, enligt vilka överensstämmelsen försäkras: ^[7] EU-direktiv - ^[8] Föremålet för försäkran ovan överensstämmer med Europaparlamentets och rådets direktiv 2011/65/EU och 2015/863 av den 22 juli 2019 om begränsning av användningen av vissa farliga ämnen i elektrisk och elektronisk utrustning: ^[9] Standarder - ^[10] Denna deklaration gäller för produkter tillverkade efter detta datum. ^[10] Denna deklaration gäller för produkter med följande serienummer och tillverkningsdatum</p>
<p>FI ^[1] Valmistaja - ^[2] Valtuutettu edustaja - ^[3] Tuotetyyppi - ^[4] Mallin nimi/nimet - ^[5] Nimellisjännite, Nimellistajuus – ^[6] Edellä kuvattu vakuutuksen kohde on asiaa koskevan unionin yhdenmukaistamislainsäädännön vaatimusten mukainen: ^[7] EY-direktiivit - ^[8] Edellä kuvattu vakuutuksen kohde on tiettyjen vaarallisten aineiden käytön rajoittamisesta sähkö- ja elektroniikkalaitteissa 22 heinäkuuta 2019 annetun Euroopan parlamentin ja neuvoston direktiivin 2011/65/EU ja 2015/863 (1) vaatimusten mukainen. ^[9] Standardit - ^[10] Tämä vakuutus on voimassa päivämäärän jälkeen valmistetusta tuotteesta alkaen. ^[10] Tämä vakuutus on voimassa tuotteelle jossa on seuraava sarjanumero ja valmistuspäivämäärä</p>
<p>ET ^[1] Tootja - ^[2] Volitatud esindaja - ^[3] Toote tüüp - ^[4] Mudeli nimetused - ^[5] Nimipinge, nimisagedus – ^[6] Eelkirjeldatud deklareeritav toode on kooskõlas asjaomaste liidu ühtlustamisaktidega: ^[7] EL Direktiivid - ^[8] Eespool kirjeldatud deklareeritav ese on kooskõlas Euroopa Parlamendi ja nõukogu 22 juuli 2019. aasta direktiiviga 2011/65/EL ja 2015/863 teatavate ohtlike ainete kasutamise piiramise kohta elektri- ja elektroonikaseadmetes: ^[9] Standardid - ^[10] Käesolev deklaratsioon kehtib pärast seda kuupäeva valmistatud tootele. ^[10] Käesolev deklaratsioon kehtib alljärgneva seerianumbriga ja valmistamiskuupäevaga tootele.</p>
<p>LV ^[1] Ražotājs - ^[2] Pilnvarotais pārstāvis - ^[3] Produkta veids - ^[4] Modeļa nosaukums(i) - ^[5] Nominālais spriegums, Nominālā frekvence – ^[6] Iepriekš aprakstītais deklarācijas priekšmets atbilst attiecīgajam Savienības saskaņošanas tiesību aktam: ^[7] EK Direktīvas - ^[8] Iepriekš aprakstītais deklarācijas priekšmets ir saskaņā ar Eiropas Parlamenta un Padomes Direktīvu 2011/65/ES no 2015/863 (2019. gada 22. jūlija) par dažu bīstamu vielu izmantošanas ierobežošanu elektriskās un elektroniskās iekārtās: ^[9] Standarti - ^[10] Šī deklarācija ir derīga no produkta izgatavošanas datuma. ^[10] Šī deklarācija ir derīga produktam ar šādu sērija numuru un izgatavošanas datumu</p>
<p>MT ^[1] Manifattur - ^[2] Rappreżentant Awtorizzat - ^[3] Tip ta' Prodott - ^[4] Isem(Ismijiet) tal-Mudell - ^[5] Rated Voltage, Rated Frequency – ^[6] L-għan tad-dikjarazzjoni deskritt hawn fuq huwa konformi mal-leġislażżjoni ta' armonizzazzjoni rilevanti tal-Unjoni: ^[7] Direttivi tal-KE - ^[8] L-għan tad-dikjarazzjoni deskritta hawn fuq huwa konformi mad-Direttiva 2011/65/UE u 2015/863 tal-Parlament Ewropew u tal-Kunsill tat-22 ta 'Lulju 2019 dwar ir-restrizzjoni tal-użu ta' ċerti sustanzi perikolużi fit-tagħmir elettriku u elettroniku: ^[9] Standards - ^[10] Din id-dikjarazzjoni hi valida mill-prodott immanifatturat wara d-data. ^[10] Din id-dikjarazzjoni hi valida għall-prodott bin-numru tas-serje u d-data tal-manifattura li ġejjin</p>



<p>LT ^[1] Gamintojas - ^[2] Igaliotas atstovas - ^[3] Gaminio tipas - ^[4] Modelio pavadinimas (-ai) - ^[5] Nominalioji įtampa, Nominalusis dažnis – ^[6] Pirmiau aprašytas deklaracijos objektas atitinka susijusius derinamuosius Sąjungos teisės aktus: ^[7] EB direktyvos - ^[8] Pirmiau aprašytasis deklaracijos objektas atitinka 2019 m. Liepos 22 d. Europos Parlamento ir Tarybos direktyvą 2011/65/ES ir 2015/863 dėl tam tikrų pavojingų medžiagų elektros ir elektroninėje įrangoje naudojimo apribojimo: ^[9] Standartai - ^[10] Ši deklaracija galioja nuo gaminio pagaminimo datos. ^[10] Ši deklaracija galioja gaminiam su šiais serijos numeriais ir šiomis pagaminimo datomis</p>
<p>SL ^[1] Proizvajalec - ^[2] Pooblašćeni zastopnik - ^[3] Tip izdelka - ^[4] Naziv(i) modela(ov) - ^[5] Nazivna napetost, Nazivna frekvenca – ^[6] Predmet navedene izjave je v skladu z ustreznim zakonodajo Unije o harmonizaciji: ^[7] Direktive EU - ^[8] Predmet navedene izjave je v skladu z Direktivo 2011/65/EU in 2015/863 Evropskega parlamenta in Sveta z dne 22. julija 2019 o omejevanju uporabe nekaterih nevarnih snovi v električni in elektronski opremi: ^[9] Standardi - ^[10] Ta izjava velja za izdelke proizvedene po datumu. ^[10] Ta izjava velja za izdelek z naslednjo serijsko številko in datumom izdelave</p>
<p>EL ^[1] Κατασκευαστής - ^[2] Εξουσιοδοτημένος αντιπρόσωπος - ^[3] Είδος προϊόντος - ^[4] Όνομασία μοντέλου - ^[5] Όνομαστική τάση, Όνομαστική συχνότητα – ^[6] Ο στόχος της δήλωσης που περιγράφεται παραπάνω είναι σύμφωνος με τη σχετική ενωσιακή νομοθεσία εναρμόνισης: ^[7] Όδηγίες ΕΚ - ^[8] Το ανωτέρω περιγραφόμενο αντικείμενο της δήλωσης είναι σύμφωνο με την οδηγία 2011/65/ΕΕ και 2015/863 του Ευρωπαϊκού Κοινοβουλίου και του Συμβουλίου, της 22ας Ιουλίου 2019, σχετικά με τον περιορισμό της χρήσης ορισμένων επικίνδυνων ουσιών σε ηλεκτρικό και ηλεκτρονικό εξοπλισμό: ^[9] Πρότυπα - ^[10] Η παρούσα δήλωση ισχύει για το κατασκευασμένο προϊόν μετά την ημερομηνία. ^[10] Η παρούσα δήλωση ισχύει για το προϊόν με τον ακόλουθο σειριακό αριθμό και την ημερομηνία κατασκευής</p>
<p>GA ^[1] Monaróir - ^[2] Ionadaí údaraithe - ^[3] Cineál Táirge - ^[4] Ainm (neacha) Samhail - ^[5] Rátáil Voltage, Miniciocht Rátáil - ^[6] Tá cuspóir an dearbhairthe a bhfuil tuairisc air thuas i gcomhréir le reachtaíocht ábhartha an Aontais maidir le comhchuibhiú: ^[7] Treoracha CE - ^[8] Tá cuspóir an dearbhairthe a bhfuil tuairisc air thuas i gcomhréir le Treoir 2011/65/AE agus 2015/63 ó Pharlaimint na hEorpa agus ón gComhairle an 22 Iúil 2019 maidir le srian ar shubstaintí guaiseacha áirithe a úsáid i dtrealamh leictreach agus leictreonach ^[9] Caighdeáin - ^[10] Tá an dearbhú baili ón táirge a mhonaraítear i ndiaidh an dáta sin. ^[10] Tá an dearbhú baili ar feadh an táirge foirgníochta an sraithuimhir leanas agus dáta monaraithe</p>
<p>HR ^[1] Proizvođač - ^[2] Ovlašteni zastupnik - ^[3] Vrsta proizvoda - ^[4] Naziv(i) modela - ^[5] Nazivni napon, nazivna frekvencija – ^[6] Predmet navedene izjave u skladu je s mjerodavnim zakonodavstvom Unije o usklađivanju: ^[7] Direktive EZ-a - ^[8] Gore opisan predmet izjave u skladu je s Direktivom 2011/65/EU i 2015/863 Europskog parlamenta i Vijeća od 22. srpnja 2019. o ograničavanju uporabe određenih opasnih tvari u električnoj i elektroničkoj opremi: ^[9] Norme - ^[10] Ova izjava vrijedi za proizvod proizveden nakon navedenog datuma. ^[10] Ova izjava vrijedi za proizvod sa sljedećim serijskim brojem i datumom proizvodnje</p>
<p>RO ^[1] Producător - ^[2] Reprezentant Autorizat - ^[3] Tipul Produsului - ^[4] Nume model(e) - ^[5] Tensiune nominală, Frecvența nominală – ^[6] Obiectul declarației descris mai sus este în conformitate cu legislația relevantă de armonizare a Uniunii: ^[7] Directive CE - ^[8] Obiectul declarației descris mai sus este conform Directivei 2011/65/UE și 2015/863 a Parlamentului European și a Consiliului din 22 iulie 2019 privind restricțiile de utilizare a anumitor substanțe periculoase în echipamentele electrice și electronice: ^[9] Standarde - ^[10] Această declarație este valabilă pentru produsele fabricate după data curentă. ^[10] Această declarație este valabilă pentru produsul cu următorul număr de serie și următoarea dată de fabricație</p>
<p>HU ^[1] Gyártó - ^[2] Meghatalmazott képviselő - ^[3] Terméktípus - ^[4] Modell(ek) neve - ^[5] Névleges feszültség, névleges frekvencia – ^[6] A fent ismertetett nyilatkozat tárgya megfelel a vonatkozó uniós harmonizációs jogszabálynak: ^[7] EC-irányelvek – ^[8] E nyilatkozat fent leírt tárgyá összhangban van az egyes veszélyes anyagok elektromos és elektronikus berendezésekben való alkalmazásának korlátozásáról szóló, 2019. július 22-i 2011/65/EU és 2015/863 európai parlamenti és tanácsi irányelvvel: ^[9] Szabványok – ^[10] Jelen nyilatkozat a megadott dátum után gyártott termékekre érvényes. ^[10] Jelen nyilatkozat a következő sorozatszámú és gyártási dátumú termékekre érvényes.</p>
<p>BG ^[1] Производител - ^[2] Оторизиран представител - ^[3] Тип продукт - ^[4] Име на модел - ^[5] Номинално напрежение, Номинална честота – ^[6] Предметът на декларацията, описан по-горе, отговаря на съответното законодателство на Съюза за хармонизация: ^[7] Директиви на ЕО - ^[8] Обектът на декларацията, който е описан по-горе, е в съответствие с Директива 2011/65/ЕС и 2015/863 на Европейския парламент и на Съвета от 22 юли 2019 г. относно ограничението на употребата на определени опасни вещества в електрическото и електронното оборудване: ^[9] Стандарти - ^[10] Тази декларация е валидна за продуктите, произведени след датата. ^[10] Тази декларация е валидна за продукта със следния сериен номер и дата на производство.</p>
<p>ZH ^[1] 制造商 - ^[2] 授权代表 - ^[3] 产品类型 - ^[4] 型号 - ^[5] 额定电压、额定频率 – ^[6] 上述声明对象符合相关欧盟协调法规 ^[7] 欧盟指令 - ^[8] 上述声明对象符合欧洲议会和欧盟理事会2019年7月22日关于在电气和电子设备中限制使用某些有害物质的指令2011/65 / EU和 2015/863 ^[9] 标准 - ^[10] 本声明自产品制造之日起生效。 ^[10] 本声明适用于具有下述序列号和制造日期的产品。</p>

ALPS5000 Drawing



Warranty

Be sure to register your warranty online:

www.thermofisher.com/labwarranty

The Warranty Period starts two weeks from the date your equipment is shipped from our facility. This allows for shipping time so the warranty will go into effect at approximately the same time your equipment is delivered. The warranty protection extends to any subsequent owner during the warranty period.

Replacement or repair of component parts or equipment under this warranty shall not extend the warranty to either the equipment or to the component part beyond the original one year warranty period. The Technical Services Department must give prior approval for the return of any components or equipment.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, OR IMPLIED. NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. Thermo shall not be liable for any indirect or consequential damages including, without limitation, damages relating to lost profits or loss of products.

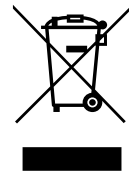
Your local Thermo Fisher Scientific Sales Office is ready to help with comprehensive site preparation information before your equipment arrives. Printed instruction manuals carefully detail equipment installation, operation, and preventive maintenance.

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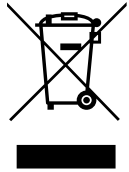
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Italia



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