

# MANUAL

# OPERATION

MANUAL NO. 056-035-00  
REV. J

## LAB-LINE® SLIDE WARMERS

MODEL NO.s | 26005  
26007  
26007CE  
26020  
26022  
26022CE  
26025  
26025-1



**LAB-LINE INSTRUMENTS, INC.**  
**DESIGNERS AND MANUFACTURERS**  
A SUBSIDIARY of Barnstead|Thermolyne  
1999 North 15th Ave., Melrose Park, IL 60160-1491 USA  
PHONE: (319) 556-2241 or (800) 522-5463; FAX: (319) 589-0516



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SECTION 1

## **INTRODUCTION**

THANK YOU

for selecting Lab-Line Instruments for your equipment needs. For maximum value and ease of start-up,

## PLEASE PROCEED AS FOLLOWS:

- Inspect the carton and contents for shipping damage. Notify the carrier immediately if damage is found.
- Use the Accessory Checklist when unpacking to verify that the complete unit has been received. Do not discard packing materials until all is accounted for.
- Read this Operation Manual thoroughly *before* deciding upon an appropriate location for the unit: you will want to consider the availability of power and other unit requirements, as well as user convenience.
- Insist that every operator of this unit becomes familiar with the Operation Section of this manual.
- Be sure to fill out the Warranty Registration Card and mail it in to Lab-Line Instruments within seven (7) days after receiving the unit.

## IF

after reading this manual you should have any difficulties with the installation or operation instructions, please call:

Lab-Line Customer Relations Department  
(319) 556-2241 or (800) 522-5463

### **ALL RIGHT RESERVED**

The information contained in this manual is the exclusive property of Lab-Line Instruments, Inc., and has been provided solely to enable the users of the equipment described herein to operate and maintain such equipment. Any other use of this information, or the reproduction or transmission of all or any portion of this manual without prior written consent of the manufacturer is expressly prohibited. © 2000, Lab-Line Instruments, Inc.

SECTION 2

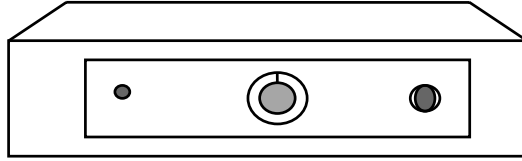
## **DESCRIPTION**

Lab-Line Slide Warmers are designed for cytology, histology, pathology, paraffin tissue section mounting and other biological applications in industrial and clinical laboratories.

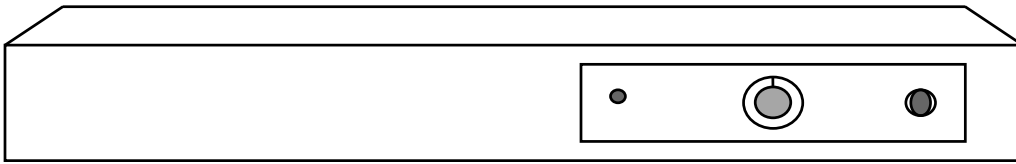
The heavy-gauge, black anodized aluminum work surface resists corrosion and provides maximum contrast of specimens against the slides. A reference-marked thermostat dial permits reproducible settings. The durable,

powder coated, heavy-duty steel body is easy to clean. Temperature is displayed on an easy-to-read LED readout for Models 26025 and 26025-1.

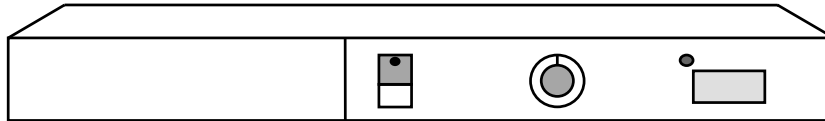
MODEL 26005



MODEL 26020



MODEL 26025



SECTION 3

# SPECIFICATIONS

POWER REQUIREMENTS:	26005:	120 VAC,	50/60 Hz, 160 Watts
	26007:	240 VAC,	50/60 Hz, 160 Watts
	26020:	120 VAC,	50/60 Hz, 160 Watts
	26022:	240 VAC,	50/60 Hz, 160 Watts
	26025:	120 VAC,	50/60 Hz, 160 Watts
	26025-1:	240 VAC,	50/60 Hz, 160 Watts

TEMPERATURE RANGE: Slightly above ambient to 65°C.

SLIDE CAPACITY:	MODELS	CAPACITY	SLIDE SIZE
	26005, 26007	65 32	1" x 3" or 2" x 3"
	26020, 26022	66 33	1" x 3" or 2" x 3"
	26025, 26025-1	66 33	1" x 3" or 2" x 3"

DIMENSIONS:	MODELS	DIMENSIONS
	26005, 26007	14" L x 14" W x 3½" H (36 x 36 x 9 cm)
	26020, 26022	25" L x 8" W x 3½" H (64 x 20 x 9 cm)
	26025, 26025	25" L x 8" W x 4½" H (64 x 20 x 11 cm)

NOTE: CE MODELS HAVE SAME SPECS. AS CORRESPONDING 240 VAC UNITS.

*UNIT'S ENVIRONMENTAL OPERATING CONDITIONS:*

POLLUTION DEGREE:	2
INSTALLATION CATEGORY:	II
ALTITUDE:	2000 Meters MSL (Mean Sea Level)
HUMIDITY:	80% maximum, non-condensing
ELECTRICAL SUPPLY:	120VAC or 240VAC
VOLTAGE TOLERANCE:	±10% of normal rated line
TEMPERATURE:	15°C to 40°C
PRODUCT USAGE:	This product is intended for use indoors <b>only</b>

SECTION 4

## **INSTALLATION**

### **√SHIPPING CARTON:**

This should be inspected upon delivery. When received, carefully examine for any shipping damage before unpacking. If damage is discovered, the delivering carrier should both specify and sign for the damage on your copy of the delivery receipt.

Open the carton carefully making certain that all parts are accounted for before packaging materials are discarded—after unpacking, if damage is found, promptly report it to the carrier and request a damage inspection promptly.

**IMPORTANT:** Failure to request an inspection of damage within a few days after receipt of shipment absolves the carrier from any liability for damage: you must call for a damage inspection promptly.

**LOCATION:**

Place the slide warmer on a table or work area in a level position that is free from direct drafts or strong air currents. In addition, it is recommended that the location not be one subjected to vibrations from other equipment or instruments.

**ELECTRICAL CONNECTION:**

Make sure that the power switch is in the **OFF** position. Before making the electrical connection, be certain that the outlet meets the power requirements listed on the nameplate of the unit. Connect the unit to a standard, 3-prong grounded outlet.

The 120V unit is supplied with a 3-wire line cord with molded plug. It should be connected to a 120V outlet designed for 3-prong plugs. For an outlet designed to accept 2-prong plugs (ungrounded), the best advice is to have a qualified electrician replace it with a new grounded outlet.

If a plug must be installed, use only the 3-prong grounded type, rated for the unit load requirements and matching the power outlet. Make sure the green ground wire is secured to the plug ground terminal—refer to the wiring schematic.

The unit must be connected to a power source that meets the electrical requirements as specified on the unit's nameplate.

**THERMOMETER INSTALLATION (APPROPRIATE MODELS):**

Lay the thermometer, which is user supplied, in the small tray above the control panel. Turn it so that the scale is easy to read.



SECTION 5

## **OPERATION**

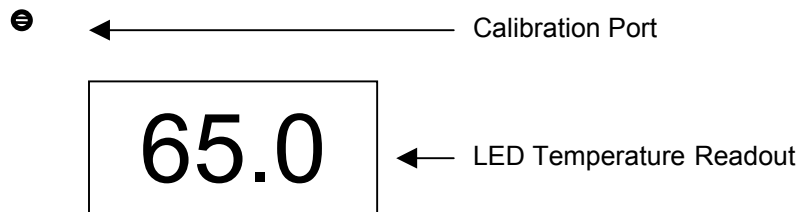
**DANGER:** DO NOT USE IN THE PRESENCE OF FLAMMABLE OR COMBUSTIBLE MATERIALS OR EXPLOSIVE GASES. DO NOT USE IN THE PRESENCE OF PRESSURIZED OR SEALED CONTAINERS—FIRE OR EXPLOSION MAY RESULT, CAUSING DEATH OR SEVERE INJURY.

**WARNING:** DO NOT HEAT ANY SUBSTANCE ABOVE A TEMPERATURE WHICH WILL CAUSE IT TO EMIT TOXIC FUMES—DEATH OR SEVERE INJURY MAY RESULT.

#### SETTING THE TEMPERATURE:

- Turn the power switch to the **ON** position
- Turn thermostat dial clockwise. The status lamp should light to indicate that the unit is heating.
- Allow at least 30 minutes for the slide warmer to heat up and stabilize at the temperature setting. The status light will cycle on and off in short intervals when the temperature has stabilized.
- Check the thermometer or LED display (appropriate models). If a change in temperature is required, turn the thermostat dial clockwise to increase the temperature and counterclockwise to decrease the temperature.
- Allow 10 to 20 minutes for slide warmer to stabilize at the new temperature setting. Repeat adjustment procedure until desired temperature is reached.

#### OPERATION: (Con't)



#### CALIBRATING THE DIGITAL TEMPERATURE DISPLAY (APPROPRIATE MODELS):

**NOTE:** A JEWELER'S SCREWDRIVER IS NEEDED TO MAKE THE NECESSARY



#### ADJUSTMENTS.

- Lift cover and place a calibrated digital thermometer near the approximate geometric center of the slide warmer's black surface.
- Set the control thermostat to the desired temperature and allow the surface temperature to stabilize at this setting for at least 30 minutes.
- Compare the temperature on the digital thermometer versus the LED temperature readout on the control panel. If there is a difference, insert the jeweler's screwdriver into the calibration port and adjust the temperature readout calibration potentiometer until the displayed readout matches the reading on the digital thermometer. Rotating the calibration potentiometer to the right increases the display reading while turning it to the left decreases the reading.

**NOTE:** IT MAY BE NECESSARY TO REPEAT THE PREVIOUS PROCEDURE WHENEVER THE SETPOINT IS CHANGED  $\pm 10^{\circ}\text{C}$  OR MORE.

## **OPERATION:** (Con't)

#### STANDARD SPECIMEN MOUNTING PROCEDURE:

- The following procedure is for mounting paraffin sections by the albumen-water method:
- Determine the melting point of the paraffin being used.
- Place the sections in position on the albumen water covered slides.
- Set the slides on top of the slide warmer.
- Maintain the surface temperature of the slide warmer, so that the temperature of the paraffin is a few degrees below melting point. If the slides are heated too rapidly, the sections may wrinkle instead of spreading out flat.
- Heat slides slowly to temperature.

- It is neither necessary nor desirable to remove the water from the slides after the sections are flattened.
- No further attention is required until the slides are dry enough to be placed in xylol. Generally, two or three hours is sufficient time to dry the slides.

SECTION 6

## **MAINTENANCE**

### **BE ADVISED:**

**NOTE:** MAKE NO ATTEMPT TO SERVICE OR REPAIR A LAB-LINE PRODUCT UNDER WARRANTY BEFORE CONSULTING YOUR LAB-LINE DEALER. AFTER THE WARRANTY PERIOD, SUCH CONSULTATION IS STILL ADVISED, ESPECIALLY WHEN THE REPAIR MAY BE TECHNICALLY SOPHISTICATED OR DIFFICULT.

IF ASSISTANCE IS NEEDED BEYOND WHAT THE DISTRIBUTOR CAN PROVIDE, PLEASE CALL THE LAB-LINE CUSTOMER RELATIONS DEPARTMENT AT (319) 556-2241 OR (800) 522-5463. NO MERCHANDISE, HOWEVER, SHOULD BE RETURNED DIRECTLY TO LAB-LINE WITHOUT PRIOR APPROVAL FROM LAB-LINE.

**CAUTION:** DISCONNECT PLUG FROM ELECTRICAL OUTLET BEFORE ATTEMPTING ANY MAINTENANCE OR REPAIR OF THIS UNIT.

The top of the slide warmer is black anodized aluminum. Wipe the surface with a damp cloth to clean it.

**NOTE:** DO NOT PLACE COVER OVER THE SLIDE WARMER BEFORE, OR IMMEDIATELY AFTER, SWITCHING OFF THE UNIT. ENOUGH HEAT MAY BE RETAINED IN THE UNIT TO RAISE THE TEMPERATURE OF THE SLIDES ABOVE THE MELTING POINT OF THE PARAFFIN. IF THIS OCCURS, THE SECTIONS MAY SPREAD IRREGULARLY AND CHANGE IN SIZE OR SHAPE.



SECTION 7

**REPLACEMENT PARTS**

	DESCRIPTION	PART NUMBER
Models 26005:		
	Cordset:	470-103-00
	Heater:	340-131-00
	Status Lamp Lens (amber):	360-235-00
	Status Lamp Base:	360-233-01
	Thermostat:	920-115-00
	Knob:	560-230-00
	Switch:	440-359-00
	Wiring Schematic:	229-089-00
Model 26007:		
	Cordset, 26007:	470-103-00
	Heater:	340-131-00
	Status Lamp Lens (amber):	360-235-00
	Status Lamp Base:	360-233-01
	Thermostat:	920-115-00
	Knob::	560-230-00
	Switch:	440-292-00
	Wiring Schematic, 26005:	229-090-00
	Wiring Schematic, 26007CE	228-728-00
Model 26022:		
	Cordset:	470-103-00
	Heater:	340-131-00

Status Lamp Lens (amber):	360-235-00
Status Lamp Base:	360-233-01
Thermostat:	920-115-00
Knob:	560-230-00
Switch:	440-292-00
Wiring Schematic, 26007, 26022:	229-090-00

Model 26025:

Cordset	470-103-00
Digital Thermometer	910-134-00
Display Transformer (240V units only)	460-306-00
Heater	340-354-00
Status Lamp Lens (amber)	360-235-00
Status Lamp Base	360-233-01
Switch (120V)	440-359-00
Switch (240V)	440-292-00
Thermostat	920-232-00
Knob:	560-230-00
Switch:	560-230-00
Wiring Schematic, 26025	228-859-00
Wiring Schematic, 26025-1	228-860-00

NEED A PART? CALL THE LAB-LINE PARTS HOTLINE.  
CALL: 1-800/522-5463; FAX: 1-800/450-4522.

LAB-LINE RESERVES THE RIGHT TO MAKE CHANGES TO SPECIFICATIONS WITHOUT PRIOR NOTICE.

## WARRANTY

Page 1 of 2

LAB-LINE INSTRUMENTS, INC. ("Lab-Line") warrants that the product manufactured by Lab-Line shall be free of defects in materials and workmanship for a period of time defined on the following page from the first to occur of (i) the date the product is sold by Lab-Line or (ii) the date the product is purchased by the original retail customer (the "Commencement Date"). Except as expressly stated above,

**LAB-LINE MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCTS AND EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF DESIGN, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

An authorized representative of Lab-Line must perform all warranty inspections. In the event of a defect covered by Lab-Line's warranty, Lab-Line shall, as its sole obligation and exclusive remedy, provide free replacement parts to remedy the defective product. In addition, for products sold by Lab-Line within the continental United States or Canada, Lab-Line shall provide free labor to repair the products with the replacement parts, but only for a period of ninety (90) days from the Commencement Date.

Lab-Line's warranty provided hereunder shall be null and void and without further force or effect if there is any (i) repair made to the product by a party other than Lab-Line or its duly authorized service representative, (ii) misuse (including use inconsistent with written operating instructions for the product), mishandling, contamination, overheating, modification or alteration of the product by any customer or third party or (iii) use of

replacement parts that are obtained from a party who is not an authorized dealer of Lab-Line.

**IN NO EVENT SHALL LAB-LINE BE LIABLE TO ANY PARTY FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR FOR ANY DAMAGES RESULTING FROM LOSS OF USE OR PROFITS, ANTICIPATED OR OTHERWISE, ARISING OUT OF OR IN CONNECTION WITH THE SALE, USE OR PERFORMANCE OF ANY PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), ANY THEORY OF STRICT LIABILITY OR REGULATORY ACTION.**

The name of your nearest authorized Lab-Line dealer may be obtained by calling 1-800-522-5463.



**DESIGNERS AND MANUFACTURERS**

A SUBSIDIARY of Barnstead|ThermoLyne

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## **WARRANTY**

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### 12 MONTH PARTS WARRANTY:

- All Environmental Chambers
- Low Temperature B. O. D. Incubators
- Animal Study Chamber
- Controlled Environment Centers
- Biological Work Station
- Refrigerators, Freezers
- Chromatography Refrigerators (5 year parts warranty on compressor only)
- Large Capacity Refrigerators and Freezers (5 year parts warranty on compressor only)

### 24 MONTH PARTS WARRANTY:

- Frame Clamps, Frame Sets, Lab Jacks
- Saybolt Viscosimeter
- Timers, Samplers, Flasks
- Saf-T-Shield, Safety Tongs
- All Incubators & Ovens
- Dual Action Open Air Shaker
- Reciprocating Shakers (open air and water bath)
- Rockers and Rotators
- Low Cost Shakers
- Environ Blok Shaker

- Titer Plate Shaker
- Multi Wrist Shaker
- Water Baths (excluding Aquabaths), Ultrasonic Cleaners
- Slide Warmers
- Mixers, Stirrers, Hotplates
- Thermal Cyclers
- Blok Heaters
- Aquabaths, lifetime warranty on heaters

LIFETIME PARTS WARRANTY:

- All **ORBITAL** Shakers (not carrying a 24 month parts warranty) offer a lifetime parts warranty on the drive mechanism and a 5 year warranty on all other parts
- Refrigerated Orbital Shakers carry a lifetime warranty on the drive mechanism, 1 year parts warranty on the compressor, and a 5 year warranty on all other parts.



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RESEARCH AND EDUCATION  
SINCE 1908.**

## **ACCESSORY CHECKLIST**



**The following loose parts and accessories are packed with this unit. Before discarding any packing materials, please be sure that nothing has been overlooked.**

MODEL NO.S : 26005, 26007, 26007CE, 26020, 26022, 26022CE, 26025, 26025-1

CHECKED BY: \_\_\_\_\_

DATE \_\_\_\_\_

PACKED BY \_\_\_\_\_

<b>CHECKED</b>	<b>ITEM</b>	<b>PART NUMBER</b>	<b>QUANTITY</b>
_____	Operation Manual	056-035-00	1
_____	Warranty Card	528-022-00	1
_____	Voltage Warning Tag (240 Volt)	528-009-00	1