Boekel Scientific

OPERATING INSTRUCTIONS
PIPET WASHER/DRYER COMBINATIONS (Models 137100 & 137100-2)
PIPET DRYER (Models 1372 & 1372-2)

PRODUCT INFORMATION

The Boekel series of Pipet Dryer and Combination Washer/Dryer are manufactured from top quality stainless steel and are designed to provide automatic washing and heat drying of glass pipets up to 375mm long. The series consists of a Pipet Washer only unit, a Pipet Dryer only unit and a Pipet Washer/Dryer unit that combines both the washing and drying functions.

Model 137100 & 137100-2 that provide washing capability can be hooked directly to the lab faucet (with user supplied hose) or permanently connected to the lab's water supply. This model is designed with a natural "air gap" in the incoming water fill tube to prevent back siphoning into the water supply.

The models that provide electrical heat drying capabilities are available in both 115 VAC and 230 VAC versions.

UNPACKING

1. Remove the unit from the carton.

2. Inspect for damage. Report all shipping damage to the carrier immediately. Shipping damages are covered by the carrier and repair and/or replacement for shipping damage must be coordinated through the carrier.

3. Retain all packaging material in the event that the unit must be returned.

4. Completely fill out and return the self addressed Boekel Warranty Registration card to Boekel Scientific.

SETUP AND OPERATION OF PIPET DRYER (Models 1372 and 1372-2)

1. Place the unit on a level surface and insert the power cord plug into a grounded receptacle of appropriate voltage.

2. For efficient operation, begin Pipet Dryer warm up while pipets are being washed. To start the Pipet Dryer, move the toggle switch to the "ON" position. The red pilot light should illuminate.

3. Allow wet pipets to drain before placing them into a hot dryer. Place pipets tip down into the Pipet Dryer. An optional pipet holder (model 13741/2) is available for transferring pipets and holding pipets in the dryer.

4. Drying time will vary, depending on quantity and size of glassware. The approximate drying time is one hour.

5. NEVER allow the Pipet Dryer to run overnight. High temperature can build up and cause the heater to burn out.

SETUP AND OPERATION OF PIPET WASHER/DRYER (Model 137100 & 137100-2)

1. Place the unit on a level surface. A level surface is required for the unit to operate and drain properly. If a slanted drain board is used, the unit must be built up on the low side so that the unit sits level.

2. A 1/2" I.P.S. hose barb is supplied for connecting the unit to a lab faucet with a user supplied rubber hose. This hose barb may be removed for alternate forms of water connection. NOTE: Some states require the use of an approved vacuum breaker in the water supply line. Please consult your local plumbing codes.

3. A 1" I.P.S. thread is provided on the drain port to allow permanent connection of a drain line if desired. Any such drain line must be capable of handling the three gallons of water that are instantly released during washing action. The drain must not back up during water release.

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4. **Typical procedure for cleaning pipets:** Load the pipets into the pipet holder supplied with the unit. Then, using a pyrex jar, soak the pipets in a Dichromatic acid solution up to 50% in strength. Allow pipets to drain when removing them from the Dichromatic solution, and then place them immediately into the Washer or Washer/Dryer unit and turn on the water to initiate the washing action.

5. Care should be taken to minimize the amount of acid solution that drips into the Washer or Washer/Dryer as acids can have a detrimental effect on the units.

6. The complete washing cycle of filling the unit with water and draining is accomplished in approximately 70 seconds, depending on the incoming water flow. It is recommended that water flow be set at about 2 to 3 gallons per minute for good washing action. Ten to fifteen washing cycles with hot water are recommended for best washing action. Cold water however can be used.

7. **To initiate the drying cycle on Washer/Dryer models 137100 and 137100-2:** insure that the water for the washing cycle has been shut off and that the water has fully drained from the unit.

8. The wet pipets from the washing cycle should be drained outside the Pipet Washer/Dryer before beginning their drying. Pipets should be in tip down for best drying results.

9. Insure that the unit's power cord plug has been inserted into a properly grounded outlet of appropriate voltage.

10. Activate the dryer heater by moving the toggle switch to the "ON" position. The red pilot light should illuminate.

11. Drying time will vary, depending on quantity and size of glassware. The approximate drying time is one hour.

12. When drying is complete, switch the unit "OFF" and allow the unit to cool for 30 minutes before beginning the next washing cycle.

13. NEVER allow the drying cycle to run over night. High temperature can build up and cause the heater to burn out and cause possible solder gaps resulting in leaks.

CLEANING

All Pipet Washer/Dryer and Dryer models can be internally rinsed with clean water and wiped externally with a damp cloth. The Pipet Dryer and Washer/Dryer models must be unplugged before any cleaning is performed. The pipet holding rack, when used, should always be rinsed if it was used in acidic solution.

SERVICE: RETURN AUTHORIZATION IS REQUIRED

Should service be required, contact your salesperson or call Boekel Scientific at 215-396-8200 or 800-336-6929.

SPECIFICATIONS

PIPET WASHER/DRYER Models 137100 and 137100-2
Height: 23 3/4"
Cylinder Diameter: 6"
Base Diameter: 10 1/2"
Model 137100 uses 115 VAC, 195 Watts
Model 137100-2 uses 230 VAC, 195 Watts
Includes 1374 1/2 Pipet Holder

PIPET DRYER Model 1372 and 1372-2
Height: 23 1/2"
Cylinder Diameter: 5 1/2"
Base Diameter: 10 1/2"
Model 1372 uses 115 VAC, 275 Watts
Model 1372-2 uses 230 VAC, 275 Watts
Optional 1374 1/2 Pipet Holder