

ScrubAir™

Pipette Washer/Dryers



**Fisher Science
Education**



Protecting your
laboratory environment

LABCONCO

ScrubAir™ Pipette Washer/Dryers

FAST, THOROUGH CLEANING WITH PERCOLATING ACTION



The ScrubAir is automated, easy to use and requires less glassware handling than traditional methods. Less handling reduces the risk for glassware breakage and possible injury.

The ScrubAir Pipette Washer/Dryer uses water, detergent and compressed air to wash, rinse and dry volumetric pipettes. This automatic washer/dryer can accommodate pipettes ranging in size from 0.135" (3.4 mm) stem diameter and 7.5" (190.5 mm) long up to 0.34" (8.6 mm) stem diameter and 25" (635 mm) long. Depending on the bulb and stem diameters, up to 60 small or 12 large pipettes may be washed at one time.

The ScrubAir works by directly injecting water and detergent into the interior of the pipettes. While in the bulbs of the pipettes, the compressed air introduced into the water line produces a percolating action that scrubs the interior walls. The water is then propelled out the top of the pipettes, hitting the top of the clear cover and cascading down. As the water cascades down, it washes the exterior of the pipettes. Each wash cycle repeats this percolating/cascading process to achieve thorough cleaning

inside and out. For each rinse cycle, this same percolating/cascading action is used. After washing and rinsing, the ScrubAir dries the pipettes in two to eight hours. No separate oven is required.

Compared to traditional siphoning washing/rinsing and oven drying, the ScrubAir consumes less water, time and money. Table 1 shows Time and Water Usage of a traditional siphon washing and rinsing/oven drying protocol and a comparable washing and drying program using the ScrubAir with heater option. As this example illustrates, the ScrubAir requires 3 1/4 hours to wash, rinse and dry as many as 60 pipettes compared to 23 hours or more with the traditional method. Eco-friendly, the ScrubAir Standard Wash Cycle uses only 12.5 liters of tap/pure water compared to 600 liters used with a siphoning method. Using less water results in an annual water cost savings of over \$2900.

Table 1

Method	Traditional Siphon Washing/ Rinsing/Oven Drying*			ScrubAir with Heater Standard Wash Setting		
	Time (min.)	Tap Water Usage (liters)	Pure Water Usage (liters)	Time (min.)	Tap Water Usage (liters)	Pure Water Usage (liters)
Washing	240	480		30	5.0	
Rinsing	120		120	45		7.5
Drying	1020			120		
TOTAL	1380	480	120	195	5.0	7.5
Water Cost per Run**		\$1.27	\$10.80		\$0.15	\$0.68
Annual Water Cost†		\$330.20	\$2808.00		\$39.00	\$176.80

The ScrubAir processes up to 60 pipettes at one time. Depending on number of pipettes processed using a siphoning method, time and water savings calculations may vary.

*Based on a 4 hour wash at a flow rate of 2 L/min., 2 hour pure water rinse at 1 L/min. and overnight drying in a oven. Since drying is typically done overnight, the amount of time may be substantially higher than noted in this example.

**Based on tap water cost of \$0.0003/L and deionized water cost of \$0.09/L.

†1 wash/day x 5 days/week x 52 weeks/year.

Features & Benefits

- **Thoroughly cleans** volumetric pipettes inside and out. Percolating action of compressed air and water scrubs the interior walls while water and detergent cascade down the outside walls.
- **Dries quickly** with compressed air in about four hours compared to up to 17 hours with traditional overnight oven drying. Models with built-in heater dry twice as fast—two hours.
- **Accommodates from 12 to 60 pipettes** depending on bulb and stem diameters. See back cover for pipette capacity details.
- **Saves water and money.** Compared to traditional siphoning methods that can use over 600 liters per load, the eco-friendly ScrubAir uses as little as 12.5 liters of tap/pure water, which adds up to water savings costs of \$2900 or more.
- **Reduces pipette inventory needs.** Since the ScrubAir washes and dries in about one fourth the time spent using traditional methods, less glassware may be kept in reserve.
- **Programmable.** Factory cycle settings (wash, rinse and dry times and number of rinses) may be user modified. Start time may be delayed up to 8 hours to take advantage of off-peak hours.
- **Less glassware handling** required, reducing the risk of breakage and personal injury. Load once for washing, rinsing and drying. No transfer needed to a separate oven for drying.
- **Portable.** Quick connect coupling allows the ScrubAir to be hooked to a sink faucet. When placed on a cart, it may be easily transported from lab to lab. (Or, if preferred, it can be installed using a dedicated water supply and drain.)

ScrubAir™ Pipette Washer/Dryers

SPECIFICATIONS & ORDERING INFORMATION



- Rear-mounted 3/8" (9.6 mm) OD x 6.0' (1.8 m) long polyethylene tube for attachment to regulated air source or other suitable inert gas.
- Operation at <75 decibels.
- One year warranty on parts and labor.
- Overall dimensions: 14.8" (37.6 cm) w x 18.6" (47.3 cm) d x 33.7" (85.6 cm) h.
- Made in the U.S.A.
- 1/8" ounce dispense pump included for attachment to liquid detergent container (Detergent sold separately).

Heater models also feature:

- Built-in 750 watt heater element, activated during the wash, rinse and dry cycles.
- Pure water inlet to select up to 10 pure water rinses.
- Rear-mounted 3/8" (9.6 mm) OD x 6.0' (1.8 m) long polyethylene tube for attachment to pure water source.

All models feature:

- Feedwater inlet/drain hose, 6.0' (1.8 m), with quick connect hose coupling and two aerator adapters for connection to standard 55/64-27 male or 15/16-27 female laboratory faucets.
- MENU button to scroll through menus to select and program wash cycles. Allows for diagnostic testing.
- SELECT button to set wash, rinse and dry cycle times and the number of rinses and for diagnostic testing.
- LCD display shows cycle segment and time remaining in that segment during a run and alternates to show total time remaining.
- Three factory-set cycle programs: STANDARD, USER 1 and USER 2. User-modifiable settings: Wash time from 0-8 hours in 1 minute increments, Rinse time for 0-4 hours in 1 minute increments, Total number of rinses from 0-10, and Dry time from 0-8 hours in 1 minute increments.
- Display alerts for LID PAUSE, FAULT-DRAIN, FAULT- NO WATER and FAULT-WATER FOUND. All faults cancel the wash cycle.
- User-set delayed start (up to 8 hours).
- Brushed Type 304 stainless steel and powder-coated steel exterior, Type 304 stainless steel pipette holder, Type 304 stainless steel back splash and clear acrylic cover.

All models conform to:

- UL* 61010-1
- CAN/CSA C22.2 No. 61010.1
- CE Conformity Marking

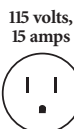
All models require:

- Tap/pure feedwater with 3/8" OD (minimum) water line
- Recommended minimum fill water temperature: 49° C (120° F)
- Maximum fill water temperature: 60° C (140° F)
- Water consumption per fill 0.46 gallon (1.75 liters) to 0.7 gallon (2.5 liters)
- Minimum feedwater pressure: 8 psi (55 kPa)
- Maximum feedwater pressure: 120 psi (827 kPa)
- Regulated compressed air with 3/8" OD air line
- Minimum feed airflow/pressure: 5 CFM (142 l/m) 20 psi (138 kPa)
- Maximum feed air pressure: 100 psi (689 kPa)
- Drain plumbing 1.25" (3.2 cm) ID or larger
- Liquid detergent (LabSolutions Liquid Detergent recommended)

Ordering Information

Catalog Number	Electrical Specifications	Plug Type	Heater	Shipping Weight
S28412	115 volts, 50/60 Hz, 2 amps	115 volts, 15 amps		84 lbs. (38 kg)
4612030	230 volts, 50/60 Hz, 1 amp	Schuko		84 lbs. (38 kg)
4612040	230 volts, 50/60 Hz, 1 amp	North America, 230 volts		84 lbs. (38 kg)
4612060	230 volts, 50/60 Hz, 1 amp	British (UK)		84 lbs. (38 kg)
4612070	230 volts, 50/60 Hz, 1 amp	China/Australia, 230 volts		84 lbs. (38 kg)
4612080	230 volts, 50/60 Hz, 1 amp	India		84 lbs. (38 kg)
S28413	115 volts, 50/60 Hz, 10 amps	115 volts, 15 amps	•	84 lbs. (38 kg)
4612031	230 volts, 50/60 Hz, 6 amps	Schuko	•	84 lbs. (38 kg)
4612041	230 volts, 50/60 Hz, 6 amps	North America, 230 volts	•	84 lbs. (38 kg)
4612061	230 volts, 50/60 Hz, 6 amps	British (UK)	•	84 lbs. (38 kg)
4612071	230 volts, 50/60 Hz, 6 amps	China/Australia, 230 volts	•	84 lbs. (38 kg)
4612081	230 volts, 50/60 Hz, 6 amps	India	•	84 lbs. (38 kg)

Plug Types



For Catalog Numbers
S28412 and S28413



For Catalog Numbers
4612030 and 4612031



For Catalog Numbers
4612040 and 4612041



For Catalog Numbers
4612060 and 4612061



For Catalog Numbers
4612070 and 4612071



For Catalog Numbers
4612080 and 4612081

*UL® is a registered trademark of Underwriters Laboratories, Inc., Northbrook, IL.

ScrubAir™ Pipette Washer/Dryers

PIPETTE CAPACITY & ACCESSORIES

Bulb Diameter	Stem Diameter	Tip to Bulb Length	Capacity
>0.95" (24.1 mm) <1.34" (33.0 mm)	>0.18" (4.6 mm) <0.34" (8.6 mm)	>7.25" (184.2 mm)	12
>0.70" (17.8 mm) <0.95" (24.1 mm)	>0.18" (4.6 mm) <0.34" (8.6 mm)	>7.25" (184.2 mm)	20
>0.49" (12.4 mm) <0.70" (17.1 mm)	>0.14" (3.6 mm) <0.30" (7.6 mm)	>7.25" (184.2 mm)	36
<0.49" (12.4 mm)	>0.14" (3.6 mm) <0.30" (7.6 mm)	>7.25" (184.2 mm)	60
>0.30" (7.6 mm) <0.45" (11.4 mm)	>0.14" (3.6 mm) <0.30" (7.6 mm)	>4.6" (116.8 mm)	24
<0.30" (7.6 mm)	>0.14" (3.6 mm) <0.30" (7.6 mm)	—	60



Portable Table S28478

Portable Table S28478

Laboratory cart adds mobility to the ScrubAir. Glacier white powder-coated tubular steel frame. 4" diameter casters, two with toe locks. Extruded rubber handle grips. Supports loads up to 400 pounds. Lifetime guarantee. Dimensions: 34.9" x 19.0" x 36.4" h (37.4 x 48.3 x 92.5 cm) Shipping weight 44.0 lbs. (20.0 kg)



ScrubAir Spindle Kit S28414

ScrubAir Spindle Kit S28414

Spindles add versatility by permitting small test tubes or vials, 7 mm ID or larger, to be washed in the ScrubAir. Kit contains 24 each 5 mm OD polystyrene plastic spindles with caps and stainless steel test tube rack to hold up to 20 each test tubes. Shipping weight 2.0 lbs. (0.9 kg)



LabSolutions Low-Foaming Liquid Detergent 4522000

5 Micron Air Filter 4614900*

Filters the incoming compressed air. Includes mounting bracket and 3/8" OD tubing for connection to the back panel of the ScrubAir. Shipping weight 0.5 lb. (0.2 kg)

LabSolutions Low-Foaming Liquid Detergent 4522000*

Removes a wide range of laboratory contaminants. Rinses completely. Non-corrosive formula won't degrade stainless steel, glass or plastic. Phosphate-free for environmentally-safe disposal. Chlorine-free and tissue culture-safe. May be used in hot or cold water. For ground shipment to U.S. or Canada only. Shipping weight 12.0 lbs. (5.4 kg)



*Contact Fisher Scientific for ordering information.

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For customer service, call 1-800-955-1177
To fax an order, use 1-800-955-0740
To order online: www.fisheredu.com

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