

Approved 5/27/09

Commercial Dishwashers

Covered Products:

This category shall cover the various types of commercial dishwashers defined below.

Definitions:

Dishwasher (or dishwashing machine): A cabinet-like appliance which, with the aid of water and detergent, is designed to wash and sanitize plates, glasses, cups, bowls, utensils, and trays by chemical, mechanical and/or electrical means and a sanitizing final rinse.

Under Counter Dishwasher: A machine with an overall height of 38 inches or less, in which a rack of dishes remains stationary within the machine while being subjected to sequential wash and rinse sprays, and is designed to be installed under food preparation workspaces. Under counter dishwashers can be either chemical or hot water sanitizing, with an internal booster heater for the latter. For purposes of this specification, only those machines designed for wash cycles of 10 minutes or less can qualify for ENERGY STAR[®].

Stationary Rack, Single Tank, Door Type Dishwasher: A machine in which a rack of dishes remains stationary within the machine while subjected to sequential wash and rinse sprays. This definition also applies to machines in which the rack revolves on an axis during the wash and rinse cycles. Subcategories of stationary door type machines include: single and multiple wash tank, double rack, pot, pan and utensil washers, chemical dump type and hooded wash compartment (“hood type”). Stationary rack, single tank, door type models are covered by this specification and can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.

Single Tank Conveyor Dishwasher: A dishwashing machine that employs a conveyor or similar mechanism to carry dishes through a series of wash and rinse sprays within the machine. Specifically, a single tank conveyor machine has a tank for wash water followed by a final sanitizing rinse and does not have a pumped rinse tank. This type of machine may include a pre-washing section before the washing section. Single tank conveyor dishwashers can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.

Multiple Tank Conveyor Dishwasher: A conveyor type machine that has one or more tanks for wash water and one or more tanks for pumped rinse water, followed by a final sanitizing rinse. This type of machine may include one or more pre-washing sections before the washing section. Multiple tank conveyor dishwashers can be either chemical or hot water sanitizing, with an internal or external booster heater for the latter.

Hot Water Sanitizing (High Temp) Machine: A dishwashing machine that applies potable hot water to the surfaces of wares to achieve sanitization.

Chemical Sanitizing (Low Temp) Machine: A dishwashing machine that applies potable water and a chemical sanitizing solution to the surfaces of wares to achieve sanitization.

Standard Setting and Certification Programs:

Various national and international standards apply to electronic appliances. They are defined here as a guide:

ENERGY STAR® is a voluntary energy efficiency program sponsored by the U.S. Environmental Protection Agency. The ENERGY STAR® program makes identification of energy efficient appliances easy by labeling products that deliver the same or better performance as comparable models while using less energy and saving money. For additional information on the ENERGY STAR® program, including product specifications and a list of qualifying products, visit the ENERGY STAR® website at <http://www.energystar.gov>.

Restriction of Hazardous Substances (RoHS) Directive – A European Parliament and Council Directive restricts the use of certain hazardous substances in electrical and electronic equipment. It bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants. For additional information on RoHS please visit <http://www.rohs.gov.uk/>.

Specifications:

Energy and Water Use:

All commercial dishwashers for which the United States Environmental Protection Agency and the United States Department of Energy have developed energy efficiency standards for compliance with the Energy Star program shall be ENERGY STAR® labeled and meet or exceed the ENERGY STAR® efficiency standard for commercial dishwashers. ENERGY STAR® qualified dishwashers use at least 41 percent less energy than the federal minimum standard for energy consumption and much less water than conventional models. This standard meets the requirements of Energy Law, Article 5, Section 5-108a and Executive Order No. 111.

Commercial dishwashers must meet the requirements provided in the table below to qualify as ENERGY STAR®. Machines designed to be interchangeable in the field from high temp to low temp, and vice versa, must be indicated as such on their Qualified Product Information (QPI) form and must meet both the high temp and low temp requirements below to qualify as ENERGY STAR®.

Energy and Water Efficiency Performance Qualifying models shall not exceed the energy and water consumption limits listed in the table below.

Efficiency Requirements for Commercial Dishwashers				
Machine Type	High Temp Efficiency Requirements		Low Temp Efficiency Requirements	
	Idle Energy Rate*	Water Consumption**	Idle Energy Rate*	Water Consumption
Under Counter	<= 0.90 kW	<= 1.00 gal/rack	<= 0.5 kW	<= 1.70 gal/rack
Stationary Single Tank Door**	<= 1.0 kW	<= 0.950 gal/rack	<= 0.6 kW	<= 1.18 gal/rack
Single Tank Conveyor	<= 2.0 kW	<= 0.700 gal/rack	<= 1.6 kW	<= 0.790 gal/rack
Multiple Tank Conveyor	<= 2.6 kW	<= 0.540 gal/rack	<= 2.0 kW	<= 0.540 gal/rack

*Idle energy rate measured with door closed and representative of the energy used by the tank heater only.

** Includes pot, pan, and utensil machines.

Testing Procedures:

- **Water Consumption:** NSF/ANSI 3-2007 Standard, Commercial Dishwashing Equipment
- **Idle Energy Rate for Hot Water and Chemical Sanitizing Under Counter and Stationary Rack Single Tank Door-Type Dishwashers:** ASTM Standard F1696, Standard Test Method for Energy Performance of Single-Rack Hot Water Sanitizing, Door-Type Commercial Dishwashing Machines.
- **Idle Energy Rate for Hot Water and Chemical Sanitizing Single and Multiple Tank Rack Conveyor Dishwashers:** ASTM Standard F1920, Standard Test Method for Energy Performance of Rack Conveyor, Hot Water Sanitizing, Commercial Dishwashing Machines.

Restriction of Hazardous Substances (RoHS) Directive:

All affected state entities are encouraged to purchase commercial dishwashers that comply with the final requirements of the European RoHS Directive 2002/95/EC for the restriction of certain hazardous substances in electronic equipment. The Directive

addresses cadmium, mercury, lead, hexavalent chromium, and certain brominated flame retardants.

Because New York State Executive Order No. 4 mandates ongoing development of lists and specifications for the procurement of commodities, services and technology that reasonably will reduce or eliminate the health and environmental risks from the use or release of toxic substances, bidders responding to solicitations are encouraged to disclose whether or not the product(s) offered comply with the final requirements of the European RoHS Directive 2002/95/EC. Voluntary responses received will be forwarded to the Executive Order No. 4 Interagency Committee on Sustainability and Green Procurement for informational purposes to enable its periodic review and supplementation of green procurement lists and specifications for use by affected entities.

Remanufactured or Recycled Content

Affected entities are encouraged to purchase commercial dishwashers which are remanufactured or incorporate recycled materials in their manufacture to the extent practicable.

Take-Back / Recycling for Centralized/Statewide Contracts:

When replacing equipment, affected entities should work with the contractor during the purchasing process to evaluate available trade-in options regardless of manufacturer. Contractors are encouraged to offer programs that include take-back or trade-in, and proper environmental disposal of equipment (including equipment manufactured and sold by others). Trade-in value/cost of take-back shall be determined on an individual basis.

State Agencies are reminded to follow State Finance Law § 167 regarding surplus property redistribution before trading or recycling any units that are still in operable condition. This standard requires donation of usable equipment to other state agencies prior to declaration of equipment as surplus or waste.

Affected entities should provide details regarding existing equipment for take-back, including make and model of equipment being disposed, location of equipment (i.e. whether equipment is located in a basement; up one flight of stairs; fourth floor location with elevator access; or whether agency will move to dock) and any other pertinent information that will assist the contractor in determining disposal costs.

If units are being transferred for disposition, a record of each disposition shall be retained by the affected entity. Documentation shall be provided to the affected entity demonstrating that these products have been disposed of in an environmentally sound manner in compliance with applicable local, state and federal laws. The contractor or disposing party shall provide assurance to the affected entity that all exports of used equipment collected for reuse, recycling or disposal will be in compliance with the laws of the importing country.

Take-Back / Recycling for Agency-specific Purchasing:

When replacing equipment, affected entities should work with the contractor during the purchasing process to look at available trade-in, reuse, and recycling options for their old equipment, regardless of manufacturer. Contractors are required to offer programs that include take-back, trade-in, and proper environmental disposal of equipment (including equipment manufactured and sold by others).

State Agencies are reminded to follow State Finance Law § 167 regarding surplus property redistribution before trading or recycling any units that are still in operable condition. This standard requires donation of usable equipment to other state agencies prior to declaration of equipment as surplus or waste.

Note: Affected entities should provide details regarding existing equipment for take-back when soliciting quotes; including make and model of equipment being disposed, location of equipment (i.e. whether equipment is located in a basement; up one flight of stairs; fourth floor location with elevator access; or whether agency will move to dock) and any other pertinent information that will assist the contractor in determining disposal costs.

If units are being transferred for disposition, a record of each disposition shall be retained by the affected entity. Documentation shall be provided to the affected entity demonstrating that these products have been disposed of in an environmentally sound manner in compliance with applicable local, state and federal laws. The contractor or disposing party shall provide assurance to the affected entity that all exports of used equipment collected for reuse, recycling or disposal will be in compliance with the laws of the importing country.

Packaging:

In accordance with Environmental Conservation Law section 37-0205, packaging shall not contain inks, dyes, pigments, adhesives, stabilizers, or any other additives to which any lead, cadmium, mercury or hexavalent chromium has been included as an element during manufacture or distribution in such a way that the sum of the concentrations levels of such lead, cadmium, mercury or hexavalent chromium exceed the following concentration level: 100 parts per million by weight (0.01%).

All bidders are encouraged to offer packaging which minimizes or eliminates the use of disposable containers; is made from recycled content; contains a minimum of 25% by weight of post consumer materials; and/or meets or exceeds the minimum post consumer content level for packaging in the U.S. Environmental Protection Agency Comprehensive Procurement Guidelines.