SECTION 22 42 26
COMMERCIAL DISPOSERS

SPEC WRITER NOTES:
1. Delete between // ____ // if not applicable to project.
2. Delete other items or paragraphs in the section that are not applicable and renumber the paragraphs.
3. Select waste machines according to usage requirements and local plumbing codes.
4. Designer Note:
This specification has links connected to other documents in VA “Technical Information Library (TIL).” These links are to facilitate designers to look into related documents while editing this specification. These links must be deleted before the specification is finalized for a particular project. To delete these links make sure macros are installed on your system, and if not do the following:
Click on Tools.
Go to Macro and click on Security.
Check the Medium Security Level.
Close the specification, if open.
Open the specification (again) and follow the prompts on the screen.
Click on Enable Macros when first prompt appears.
Delete the links only if specification is ready to be included in the project.

PART 1 - GENERAL

1.1 DESCRIPTION
A. This section specifies food waste machines as follows:
   //1. Food waste disposers.//
   //2. Food and paper waste pulper and water extractor systems.//
   //3. Food waste grinder and water extractor systems.//
   //4. Water recirculating food waste disposer systems.//
   //5. Water recirculating food waste separator systems.//

1.2 RELATED WORK

SPEC WRITER NOTE: Retain paragraph below if food waste machines are mounted on custom-fabricated, stainless steel tables with sinks, etc.

A. Equipment with Food Waste Machines:
B. Seismic Restraint of Equipment: Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

C. Plumbing Connections: Section 22 13 00, FACILITY SANITARY SEWERAGE.

D. Electrical Connections: Section 26 05 21, LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES (600 VOLTS AND BELOW).

E. Electrical Disconnect Switches: Section 26 29 21, DISCONNECT SWITCHES.

F. SECTION 22 08 00 – COMMISSIONING OF PLUMBING SYSTEMS.
   Requirements for commissioning, systems readiness checklist, and training.

1.3 QUALITY CONTROL

A. Installer Qualifications:Licensed electrician and plumber experienced with food service equipment installation or supervised by an experienced food service equipment installer.

   SPEC WRITER NOTE: UL Environmental and Public Health (EPH) Classification Mark is currently used by UL to certify compliance with NSF/ANSI standards. Equipment evaluated by UL before 2001 may bear the UL Food Service Product Certification Mark.

B. NSF Compliance: Equipment bears NSF Certification Mark or UL Classification Mark indicating compliance with NSF/ANSI 13 – 2009.

C. UL Listing: Equipment is evaluated according to UL 430 and listed in UL's "Heating, Cooling, Ventilating and Cooking Equipment Directory" and labeled for intended use.

   1. Products that contain features, characteristics, components, materials, or systems different from those covered by UL 430 shall be evaluated by UL using appropriate additional component and end-product requirements to maintain the level of safety anticipated by the intent of UL 430.


   SPEC WRITER NOTE: Retain paragraph and subparagraphs below if required for project location.

E. Seismic Restraint:

   1. Comply with requirements in Section 13 05 41, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.

1.4 SUBMITTALS
A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
B. Manufacturer’s Literature and Data:
   1. Include manufacturer's address and telephone number.
   2. Include catalog or model numbers, illustrations and descriptions of food waste machines and accessories.
C. Installation Drawings: Show dimensions; method of assembly; and details of installation, adjoining construction, coordination with plumbing and electrical work, and other work required for a complete installation.
D. Operating Instructions: Comply with requirements in .

1.5 APPLICABLE PUBLICATIONS
A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
B. American Welding Society (AWS):
   D9.1M/D9.1-2006 ............ Sheet Metal Welding Code
C. NSF International/American National Standards Institute (NSF/ANSI):
   13-2009 .................... Refuse Processors and Processing Systems
D. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA):
E. Underwriters Laboratories Inc. (UL):
   430 ....................... Waste Disposers
F. UL Heating, Cooling, Ventilating and Cooking Equipment Directory

PART 2 – PRODUCTS
2.1 FOOD WASTE DISPOSER
A. Food Waste Disposer Unit:
   1. Corrosion-proof construction housing and dual-direction shredding elements.
   2. Flow control.
   4. Vacuum breaker.
   5. Fixed nozzle.
B. Motor:
1. TEFC Motor (Totally Enclosed Fan Cooled) Construction.
2. Built-In Thermal Overload Protection.

C. Control Panel:
1. Autoreversing and internal time water flush.
2. Stainless-steel mounting bracket.

D. Pre-rinse:
1. Backsplash mounted with hot- and cold-water mixing valve.
2. Wall support bracket.
3. Flexible 10 mm (3/8 inch) metal-encased hose supported by spiral spring, minimum length 737 mm (29 inches).
4. Spray head assembly with lockable lever handle.
5. Exposed metal parts are chrome plated or stainless steel.

E. Accessories:
1. Collar adaptor for sink.
2. Collar adaptor for trough.
3. Cone with adaptor ring.
4. Cone cover.
5. Silver accumulator.

SPEC WRITER NOTES:
1. Select W (hp) for units based on size of facility and anticipated use as follows:
   a. 2238 W (3 HP) - Light Use:
      Small and medium-size facility - pot and pan sinks.
      Small facility - warewashing.
      Small and large-size facility - prep sinks.
   b. 3730 W (5 HP) - Medium Use:
      Medium facility - warewashing.
      Large facility - pot and pan sinks.
   c. 5222 W (7 HP) - Heavy Use:
      Large facility - warewashing.
2. Symbols below correspond with "Room Equipment Guide" identification system. Verify project requirements before specifying equipment that deviates from "Room Equipment Guide."
3. Edit symbols to coordinate with identification shown on drawings.

F. Disposer Nomenclature:
<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>UNIT SIZE</th>
<th>CONE AND COVER SIZE</th>
<th>ACCESSORIES</th>
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<tbody>
<tr>
<td>K2331</td>
<td>2238 W (3 hp)</td>
<td>304 mm (12 inches)</td>
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<td></td>
<td></td>
<td>Spray rinse assembly</td>
</tr>
<tr>
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<td>450 mm (18 inches)</td>
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<td></td>
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<td>Spray rinse assembly</td>
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<td>380 mm (15 inches)</td>
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<td>Control panel</td>
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<td>Control panel</td>
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<td>Control panel</td>
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<td></td>
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<td>Spray rinse assembly</td>
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<tr>
<td>K2355</td>
<td>3730 W (5 hp)</td>
<td>450 mm (18 inches)</td>
<td>Trough connection</td>
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<td>Control panel</td>
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<td></td>
<td></td>
<td></td>
<td>Spray rinse assembly</td>
</tr>
<tr>
<td>K2371</td>
<td>5222 W (7 hp)</td>
<td>304 mm (12 inches)</td>
<td>Control panel</td>
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<td>Spray rinse assembly</td>
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<tr>
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<td></td>
<td>Spray rinse assembly</td>
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<tr>
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<td></td>
<td>Spray rinse assembly</td>
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</table>

### 2.2 Food and Paper Waste Pulper and Water Extractor System

**SPEC WRITER NOTE:** Waste-pulping system is used where there is more paper waste than food waste.

A. Construction of Pulper:
1. Stainless steel tank with water flushed feed, hinged lid with limit switch, slurry chamber and internal junk box with cutters.

B. Construction of Extractor:
1. Housing assembly to be stainless steel.
2. 6-Inch diameter gear driven helical screw with attaché nylon brush mounted in a perforated cylindrical screen.
3. Stainless steel discharge housing, complete with stainless steel discharge chute, and gear reducer.
4. Structural base constructed of tublar steel all welded with stainless steel flanged feet for bolting to the floor.

C. Control Panel:
1. Stainless steel NEMA-4 enclosure with prewired terminal strip, water-level control, push-button station, main circuit breaker interlocked with door handle. Magnetic starters, and individual three leg thermal overload protection for each motor.

D. Motors and Pumps:
1. TEFC (Totally Enclosed Fan Cooled), and sized for operation as indicated by facility needs.

E. Accessories:
1. Feed trough connection.
2. Feed tray.
3. Feed hood assembly.
4. Under-dishtable lid.
5. Remote water extractor:
   a. Dam, to prevent siphoning of water from pulper tank.
   b. Remote piping system (overhead or below floor).
6. Extended discharge chute.
7. Extended stand.
8. Pulp level detection.

SPEC WRITER NOTE: Select size according to anticipated use; actual use should not exceed 90 percent of capacity of unit.

F. Size: Manufacturer rates waste-processing capacity at not less than // 272 kg (600 lb) // 318 kg (700 lb) // 408 kg (900 lb) // of waste per hour.

SPEC WRITER NOTES:
1. Symbols below correspond with "Room Equipment Guide" identification system. Verify project requirements
before specifying equipment that
deviates from "Room Equipment Guide."
2. Edit symbols to coordinate with
identification shown on drawings.

G. Pulper/Water Extractor Equipment Nomenclature:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>PULPER/WATER EXTRACTOR DESCRIPTION</th>
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<td>Slurry pump</td>
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<td>Extractor</td>
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<td>K2402</td>
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<td>Slurry pump</td>
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<tr>
<td></td>
<td>Control panel</td>
</tr>
<tr>
<td></td>
<td>Remote extractor</td>
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</table>

2.3 FOOD WASTE GRINDER AND WATER EXTRACTOR SYSTEM

SPEC WRITER NOTE: Food waste grinder is used where there is a higher percentage of food waste than paper waste.

A. Food Waste Grinder/Water Extractor:

1. Stainless-steel construction, food waste hopper, silver saver, internal disposal, removable water extraction auger with internal water sprays, discharge chute, and off and on controls on unit.

2. Accessories:
   a. Reel rinse unit with spray valve.
   b. Recirculation water pump.
   c. Trough mount.

B. Undercounter Food Waste Grinder and Water Extractor:

1. Stainless-steel fabricated undercounter water extractor (cleanable).

2. Separate disposer, corrosion-proof construction housing, and dual-direction shredding elements.

3. Pre-piped valve package with all valves for operation of unit, including pump.

4. Required Accessories:
a. Vacuum breaker.
b. Solenoid valve.
c. Flow control.
d. Time-delayed relay.

5. Mounting Assembly Accessories:
   a. // 304 mm (12 inch) // 380 mm (15 inch) // 450 mm (18 inch) // cone with adaptor ring.
   b. Cone cover in size that matches cone.
   c. Silver sorter.
   d. Trough collar connection.

6. Control Panel:
   a. Autoreversing and internal time water flush.
   b. Stainless-steel mounting bracket.
   c. NEMA 4 stainless steel enclosure.
   d. Control and water level components pre-wire to terminal strip.
   e. Push button.

C. Prerinse:
   1. Backsplash mounted with hot- and cold-water mixing valve.
   2. Wall support bracket.
   3. Flexible 10 mm (3/8 inch) metal-encased hose supported by spiral spring, minimum length 737 mm (29 inches).
   4. Spray head assembly with lockable lever handle.
   5. Exposed metal parts are chrome plated or stainless steel.

   SPEC WRITER NOTE: Select size according to anticipated use; actual use should not exceed 90 percent of capacity of unit.

D. Size: Manufacturer rates waste-processing capacity at not less than // 272 kg (600 lb) // 318 kg (700 lb) // of waste per hour.

   SPEC WRITER NOTES:
   1. Symbols below correspond with "Room Equipment Guide" identification system. Verify project requirements before specifying equipment that deviates from "Room Equipment Guide."
   2. Edit symbols to coordinate with identification shown on drawings.

E. Food Waste Grinder and Water Extractor Equipment Nomenclature:

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>FOOD WASTER GRINDER/WATER EXTRACTOR DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>K2501</td>
<td>Trough connection</td>
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<tr>
<td></td>
<td>Control panel</td>
</tr>
</tbody>
</table>
K2502 Undercounter type
Cone connection
Control panel

2.4 WATER RECIRCULATING FOOD WASTE DISPOSER SYSTEM

A. Disposer: Corrosion-proof construction housing and dual-direction
shredding elements, salvage basin, and disposer safety cover.

1. Required Accessories:
   a. Siphon breaker.
   b. Solenoid valve.
   c. Time-delayed relay.
   d. Vacuum breaker.
   e. Check valves.
   f. Automatic water blender.
   g. Incoming water valve.
   h. Quick opening drain valve.

B. Control Panel:
   1. Autoreversing and internal time water flush.
   2. Stainless-steel mounting bracket.
   3. Flow control.
   4. NEMA 4 with watertight conduit and fittings.
   5. Safety switch.
   6. Operating light.
   7. 24-volt safety circuitry.

C. Mounting Assembly Accessories:
   1. Tray unit.
   2. Silver sorter.
   3. Trough collar connection.

D. Size: // 2238 W (3 hp) // 3730 W (5 hp) // 5595 W (7-1/2 hp) //.

SPEC WRITER NOTES:
1. Symbols below corresponds with "Room Equipment Guide" identification
   system. Verify project requirements before specifying equipment that
   deviates from "Room Equipment Guide."
2. Edit symbols to coordinate with identification shown on drawings.

E. Water Recirculating Food Waste Disposer Equipment Nomenclature:

<table>
<thead>
<tr>
<th>SYMBOL</th>
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<tbody>
<tr>
<td>K2601</td>
<td>Tray</td>
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<td></td>
<td>Control panel</td>
</tr>
</tbody>
</table>
2.5 WATER RECIRCULATING FOOD WASTE SEPARATOR SYSTEM

A. Food Waste Separator:
1. Noncorrosive construction.
2. Salvage basin - high impact polymer.
3. Water inlet with water blender.
4. Safety cover.
5. Nonclogging pump.
6. Overflow pipe.
7. Incoming water valves.
8. All electrical components to have separate grounding.
9. Motor to be thermally protected with safety line disconnects.
10. Solenoid valves, unions, check valves and backflow preventer.

B. Control Panel:
1. Recirculating water in unit, automatic reversal.
2. NEMA-4 with watertight conduit and fittings.
4. Operating light.

C. Accessories:
1. Tray pan.
2. Trough collar connection; various widths.
   a. Water inlets along length of trough.

SPEC WRITER NOTES:
1. Symbol below corresponds with "Room Equipment Guide" identification system. Verify project requirements before specifying equipment that deviates from "Room Equipment Guide."
2. Edit symbol to coordinate with identification shown on drawings.

D. Water Recirculating Food Waste Separator Equipment Nomenclature:

<table>
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<th>SYMBOL</th>
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<td>Tray pan</td>
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<tr>
<td></td>
<td>Trough connection</td>
</tr>
</tbody>
</table>
PART 3 – EXECUTION

3.1 INSTALLATION

SPEC WRITER NOTE: Indicate requirements for mounting waste disposers on drawings.

A. Install food waste machines, including controls and accessory equipment, arranged for safe and convenient operation and maintenance.
B. Install food waste machines to prevent backflow of polluted water or waste into water supply system or on to food preparation work surfaces.
C. Install and interconnect electrical controls and switches.

SPEC WRITER NOTE: Retain paragraph below if required for project location.

D. Install seismic restraints for equipment.

3.2 PROTECTING AND CLEANING

A. Protect equipment from dirt, water, and chemical or mechanical injury during the remainder of the construction period.
B. At completion of work, clean, lubricate, and adjust food waste disposers as required to produce ready-for-use condition.
   1. Where stainless-steel surfaces are damaged during food waste disposer installation procedures, repair finishes to match adjoining undamaged surfaces.

3.3 INSTRUCTIONS

Instruct personnel and transmit operating instructions in accordance with requirements in.

3.4 COMMISSIONING

A. Provide commissioning documentation in accordance with the requirements of Section 22 08 00 – COMMISSIONING OF PLUMBING SYSTEMS for all inspection, startup, and contractor testing required above and required by the System Readiness Checklist provided by the Commissioning Agent.
B. Components provided under this section of the specification will be tested as part of a larger system. Refer to Section 22 08 00 – COMMISSIONING OF PLUMBING SYSTEMS and related sections for contractor responsibilities for system commissioning.

- - - E N D - - -