

**Chapter L**  
**RESTAURANT EQUIPMENT**  
**Code References**

**1.) GENERAL**

**a. Definition**

- (1) air-gap, water system Comm 81.01(7)
- (2) air-gap, drain system Comm 81.01(6)
- (3) floor sink Comm 81.01(105)
- (4) grease interceptor Comm 81.01(113)
- (5) indirect waste piping Comm 81.01(131)
- (6) receptor Comm 81.01(201)
- (7) waste sink Comm 81.01(275)

**b. Floor sink installation** Comm 82.33(8)(a) & (b)

**c. Receptor installation** Comm 82.33(8) & (8)(a)

**d. Indirect waste piping** Comm 82.33(1)(b)

**e. Indirect waste piping materials** Comm 82.33(2)

**f. Indirect waste piping (without traps)** Comm 81.01(113)

**g. Indirect waste piping (with traps)** Comm 82.33(5)

**h. Waste sink installation** Comm 82.33(8)(a)

**i. Grease interceptor drains flowing to** Comm 82.34(5)(d)7.

**j. Restaurant sinks (scullery)** See Chapter M in this manual.

**k. Hand sinks (Health Depart. Requirements)** See Chapter M in this manual.

**l. Restaurant sinks (Prep sinks)** See Chapter M in this manual.

**m. Accessibility Requirements (ADA) hand sinks plumbing rough-in measurements** See Chapter M in this manual.

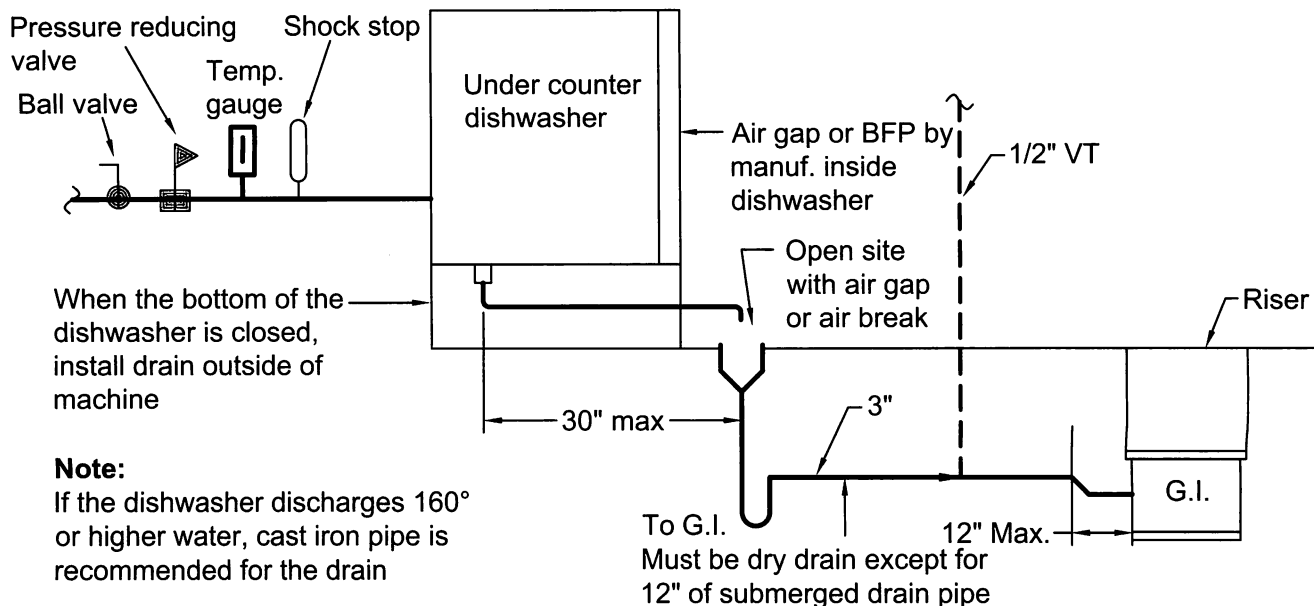
**n. Grease interceptor sizing (interior)** See Chapter M in this manual.

**o. Grease interceptor sizing (exterior)** See Chapter H page H 14, 15 in this manual.

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**RESTAURANT EQUIPMENT**  
Glasswashers and Dishwashers



**Note:**

If the dishwasher discharges 160° or higher water, cast iron pipe is recommended for the drain

**Drain Options**

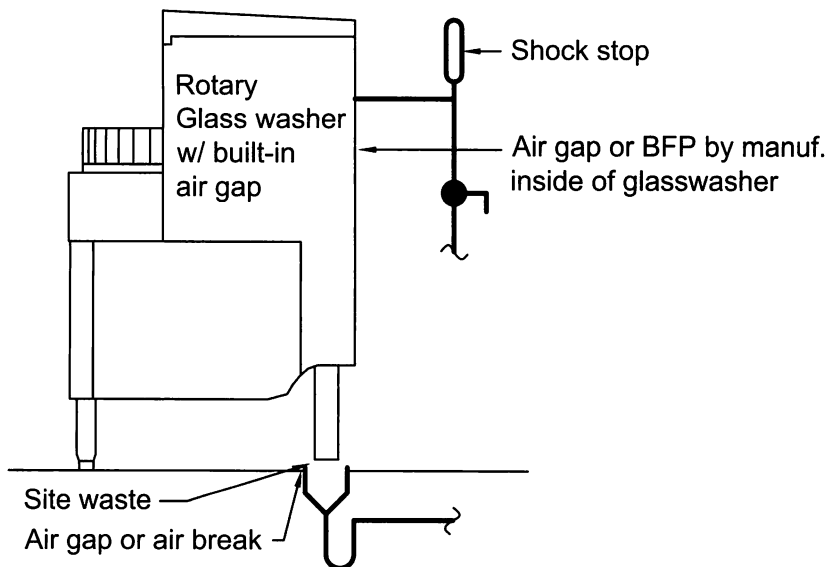
**UNDER COUNTER COMMERCIAL DISHWASHERS**

Some under counter dishwashers discharge as a dump machine meaning that they do not have a pump. However, there are under counter dishwashers which have a pump, when the machine has a pump, then the drain may be in the floor or in the wall.

When the drain is in the floor, it may be installed under the machine (if accessible) or to one side or the other as shown above. Access to the drain is required and when the drain is in the wall or above floor, a pump type dishwasher is required. The top of the drain which receives the discharge from the dishwasher shall be as required by the manufacturer. Some machines will only pump 12" high but others can pump up to 42" high. Therefore, the installer must have the rough-in drawings before installation.

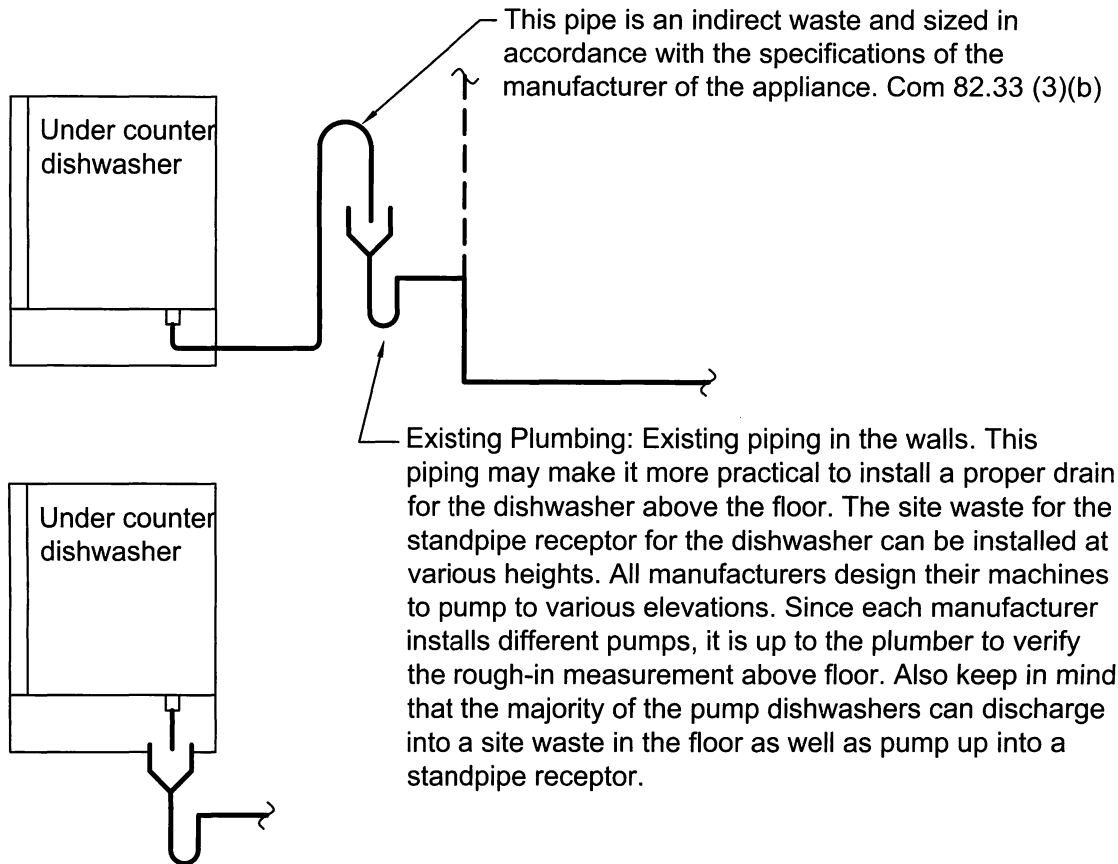
**Water Options**

Hot water for dishwashers can be 180° or 140°. If 140° water is provided, then a sanitation device is provided for the dishwasher. In most machines, if 180° is required, then a pre-heater is part of the machine. A pressure reducing valve reducing the water pressure to 25 psi is required. Also a shock stop and temperature gauge should be part of the installation.



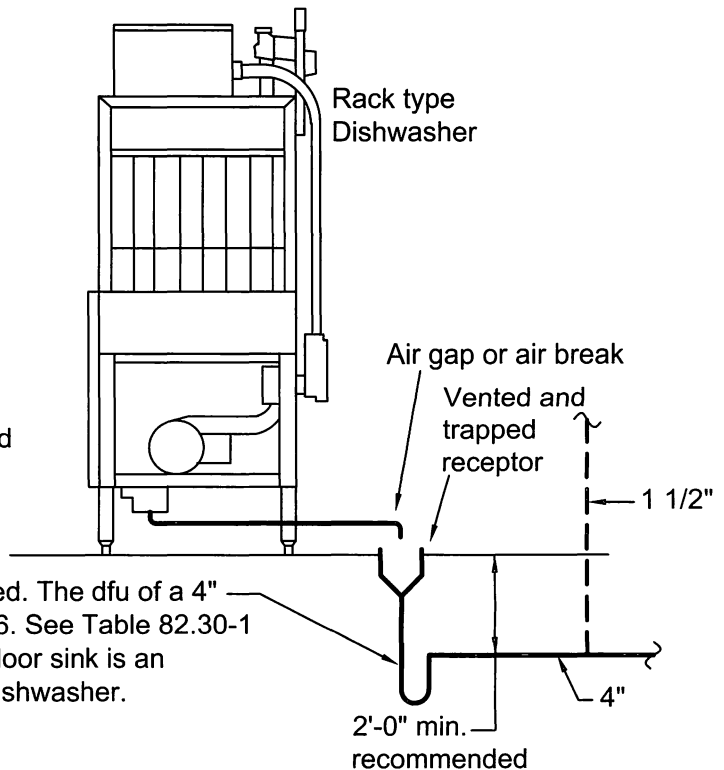
**RESTAURANT EQUIPMENT**

**Under Counter Commercial Dishwashers**



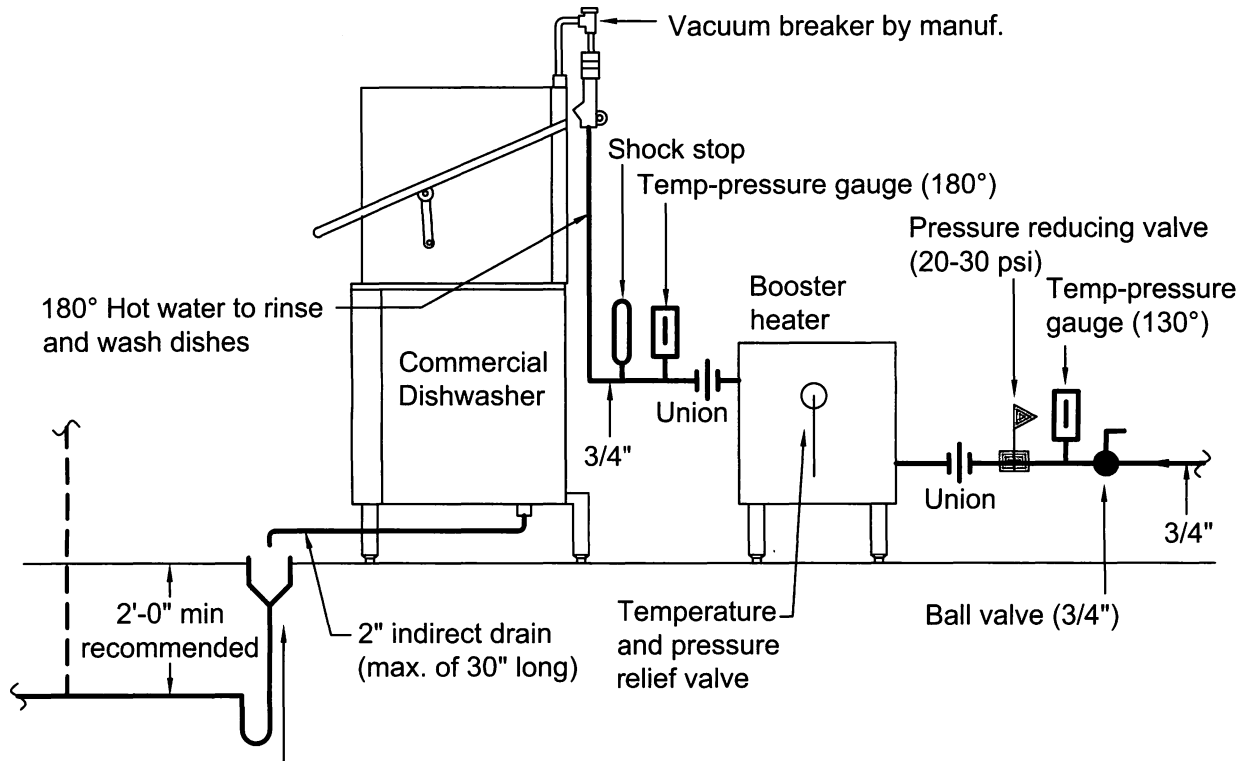
If the machine has a pump, it could be piped as shown without draining the contents of the washing or rinsing cycles of the dishwasher because the drain has a positive closure.

Commercial dishwashers must discharge into a vented and trapped receptor or site waste by means of an air gap or an air break. The indirect waste pipe (the piece of pipe from the machine to the vented and trapped receptor) may not be more than 30" in length. See Com 82.33 (9)(d) 2.

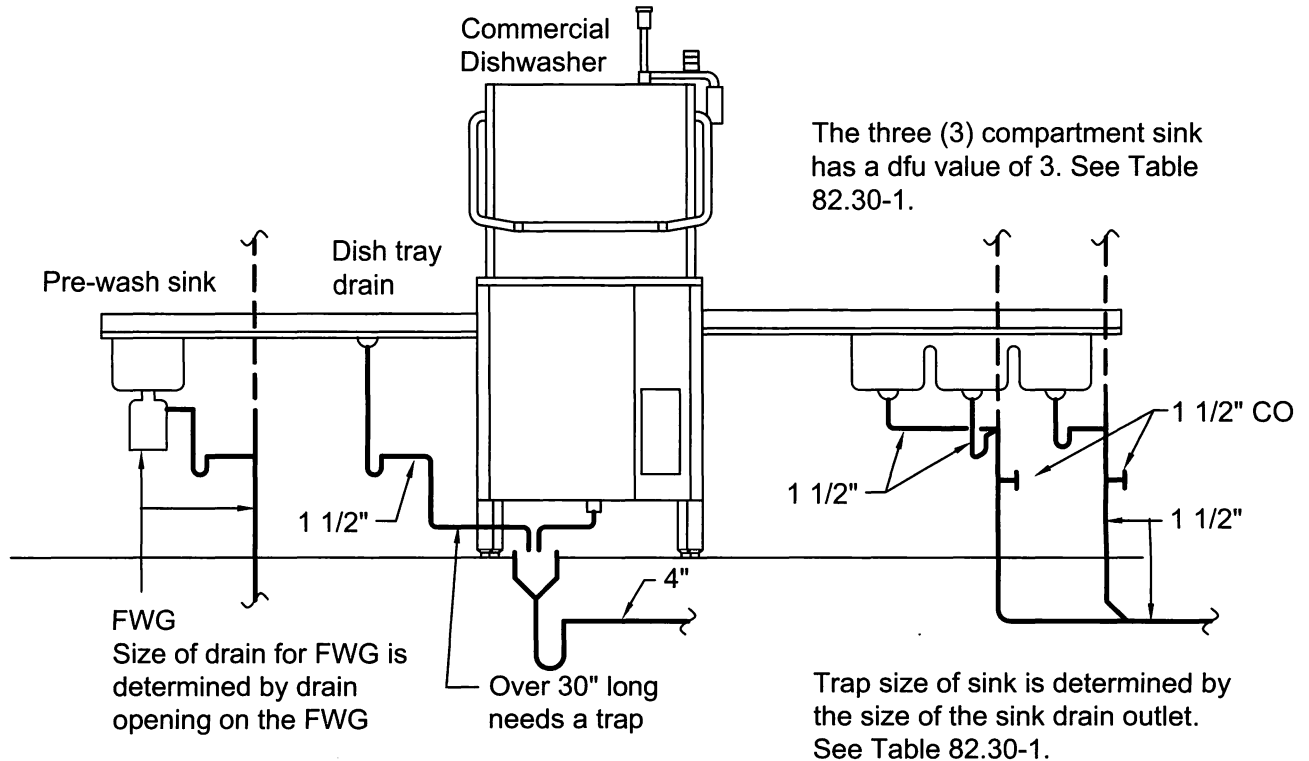


A 4" trap and drain is recommended. The dfu of a 4" receptor for a dishwasher drain is 6. See Table 82.30-1 (Commercial Dishwasher) Also a floor sink is an acceptable method of draining a dishwasher.

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 Commercial Dishwashers



Vented and trapped receptor. Com 82.33 (9)(d) 2. Indirect waste pipe (30" max.) Com 82.33 (9)(d) 2. 4" Minimum drain - Table 82.30-1 (Dishwasher, Commercial) Fixture unit value of 4" receptor is 6. Table 82.30-1. Minimum size vent - Table 82.31-3. Minimum drain size of dishwasher receptor - Table 82.30-1.

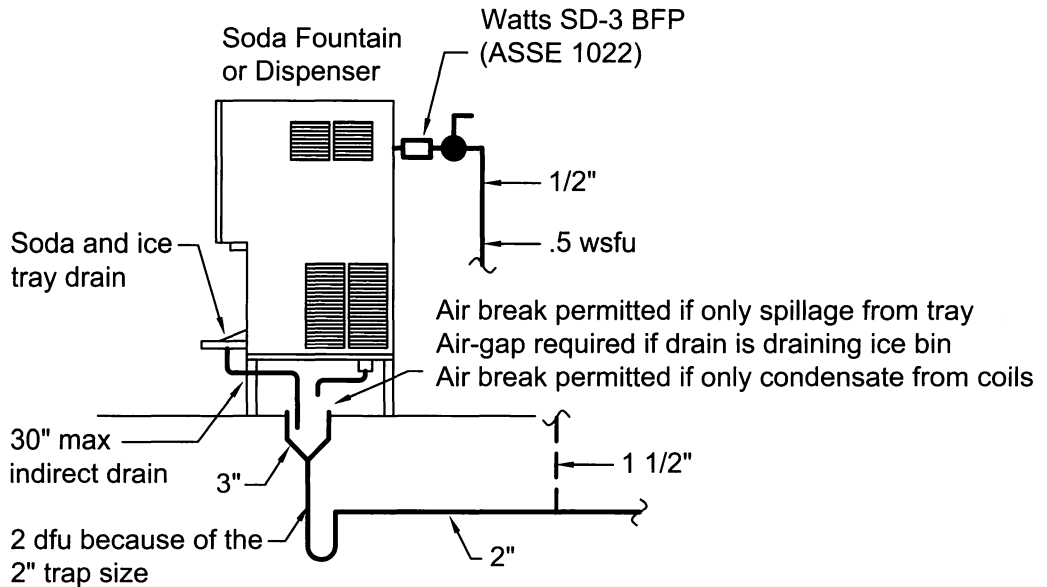
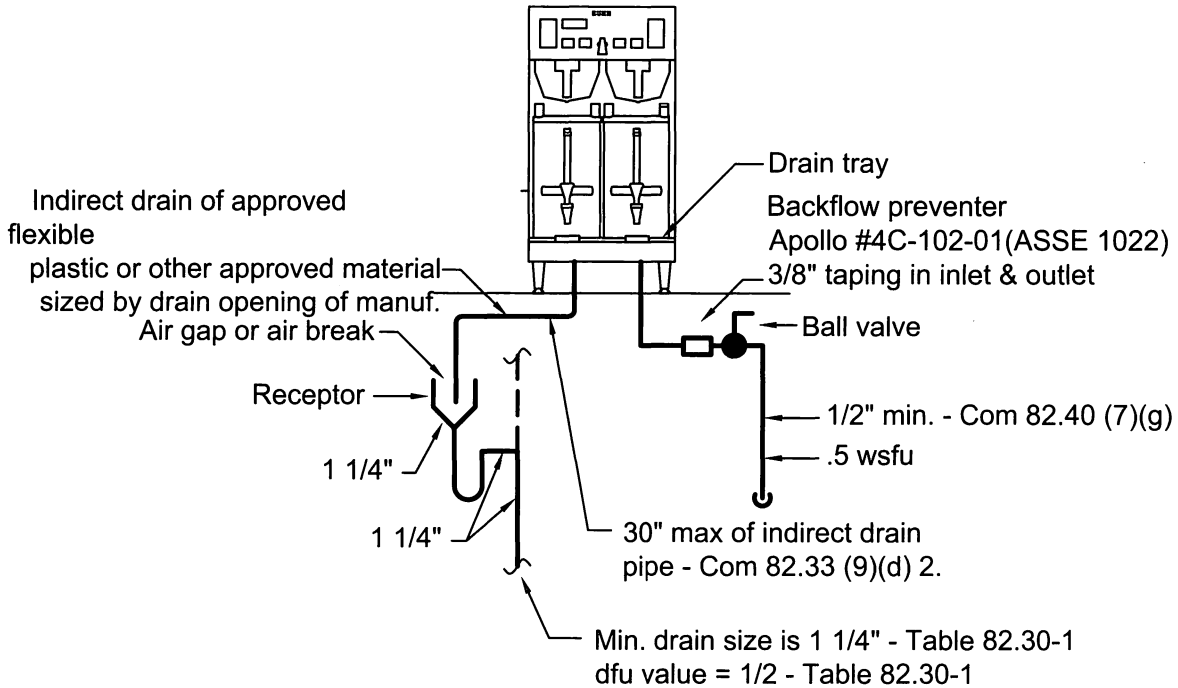


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Coffee Brewers, Cappuccino Machines, Soda Fountains

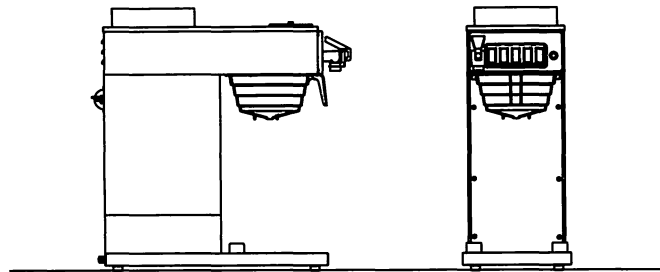
Coffee Brewer (wsfu = .5) Table 82.40-2



The drain from the soda & ice tray is draining spillage and is permitted to discharge by means of an air break. The second drain discharging from the bottom of the Dispenser must discharge by means of an air gap if it is draining an ice bin or similar. If it is draining a condensate area of the Dispenser, it would be permitted to drain by means of an air break.

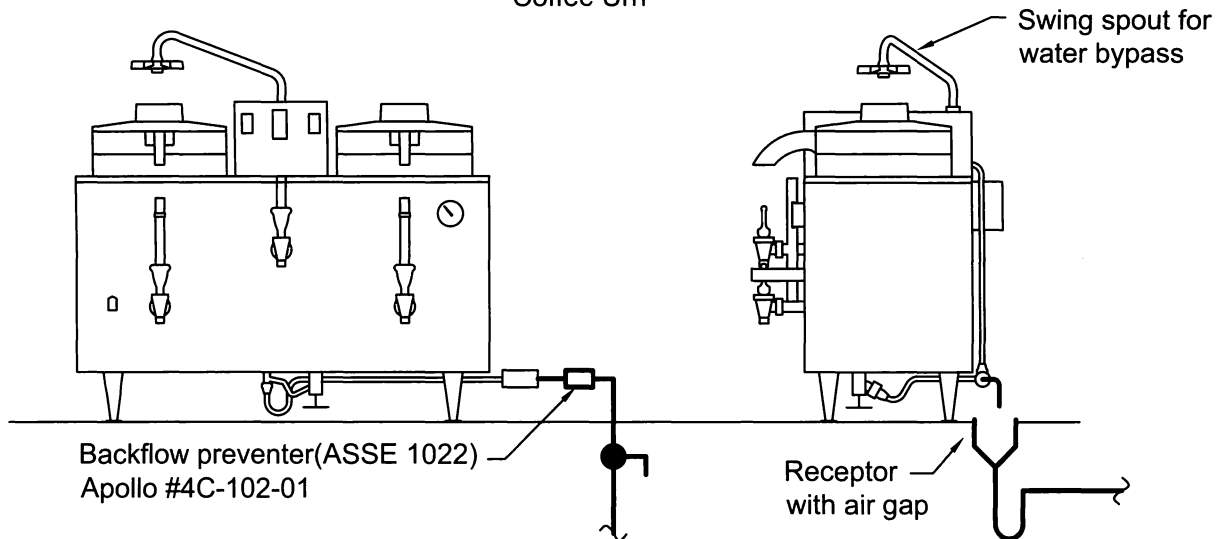
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Coffee Brewers, Coffee Urns

Coffee Brewer



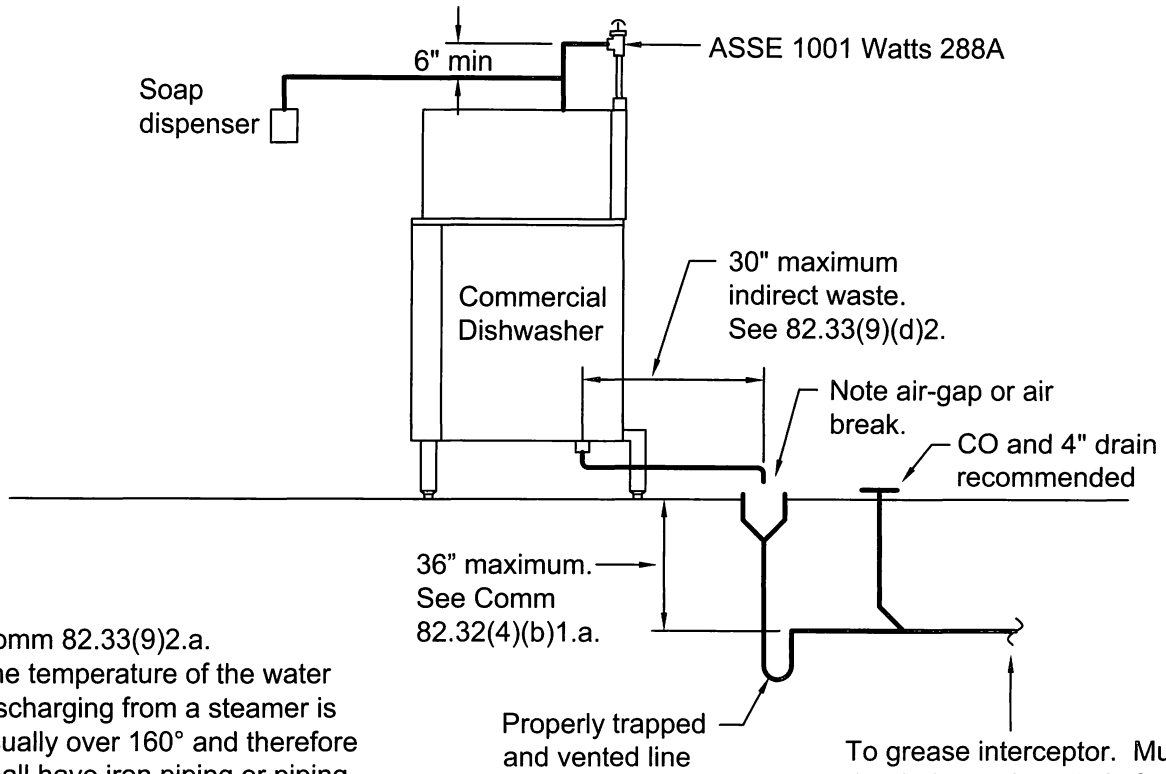
Coffee Brewer (automatic coffee brewer) Some units are provided with a hot water faucet. Requires an ASSE 1022 backflow preventer. IE: Apollo No. 4C-102-01  
Plumbing: 20-80 psi. Machine supplied with 1/4" male flare fitting

Coffee Urn

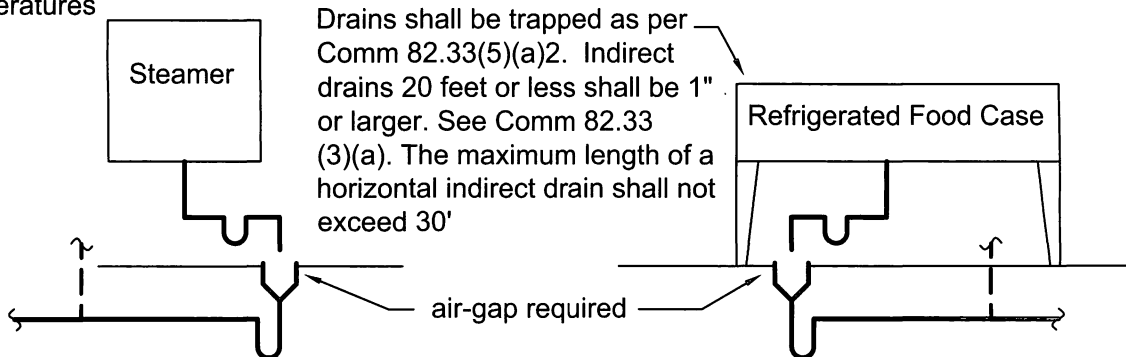


Coffee urn with 3/8" male fitting. The model shown is with a swing spout for water by-pass, water connection at side and back of unit. Requires an ASSE 1022 back flow preventer. IE: Apollo No. 4C-102-01. Provide an air-gap on the drain. Install a filtering device if required.

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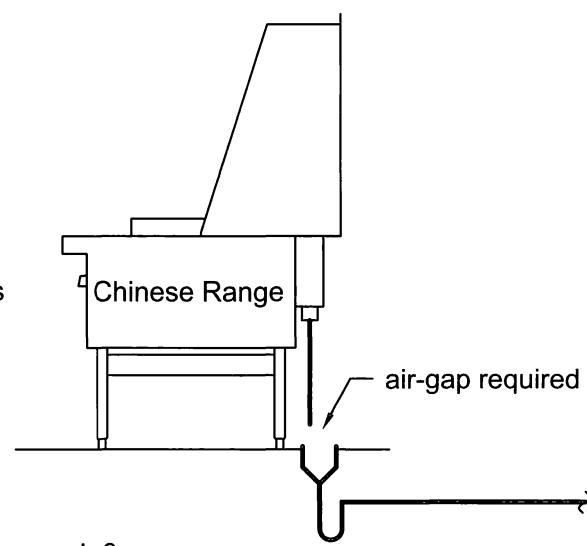


Comm 82.33(9)2.a.  
 The temperature of the water discharging from a steamer is usually over 160° and therefore shall have iron piping or piping which can withstand the high temperatures



Materials for the receptor drain and related piping for a steamer shall be capable of withstanding high water temperatures.

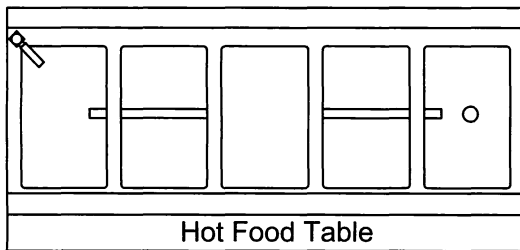
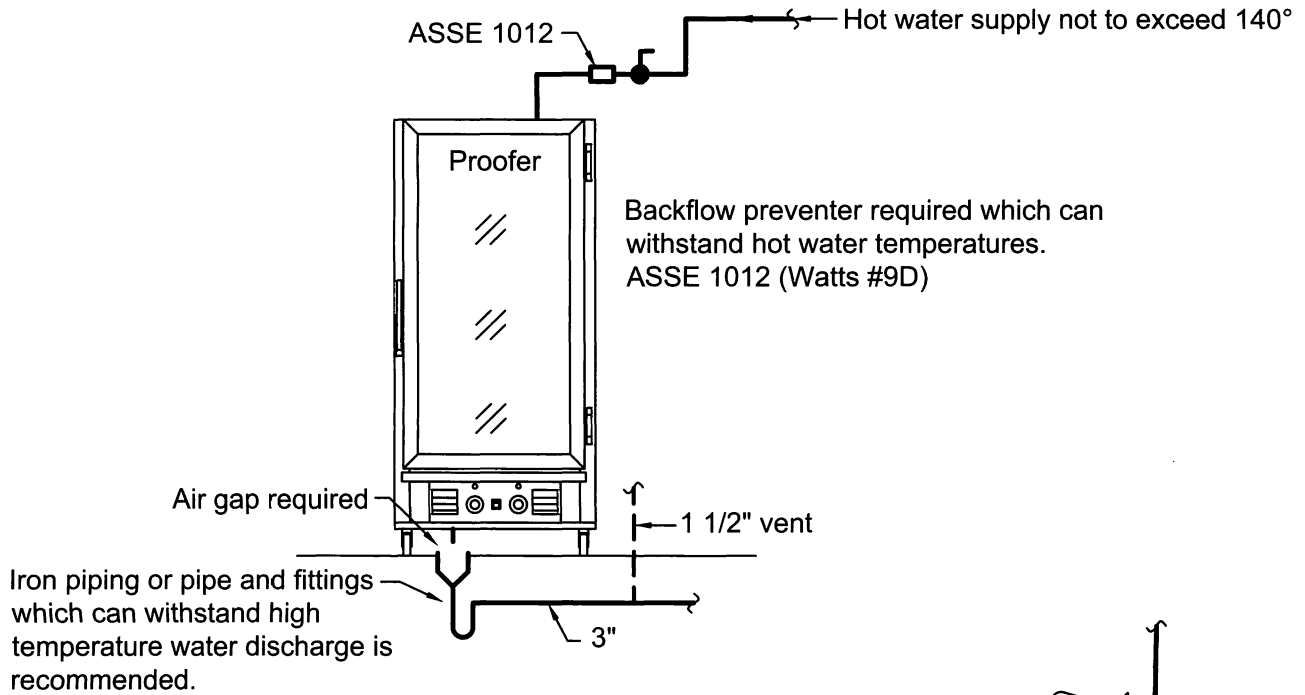
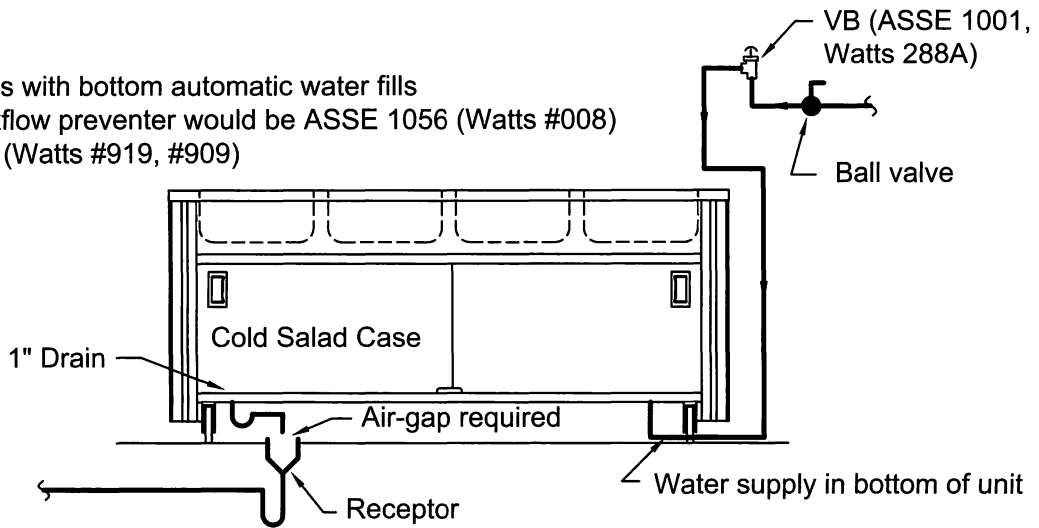
Chinese ranges that are provided with multiple frying kettles and multiple faucets with 1/2" water piping installed at the factory to serve those faucets would be acceptable to the Department of Commerce if all other codes are met.



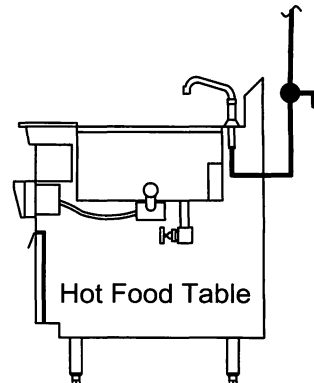


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For salad cases with bottom automatic water fills approved backflow preventer would be ASSE 1056 (Watts #008) or ASSE 1013 (Watts #919, #909)

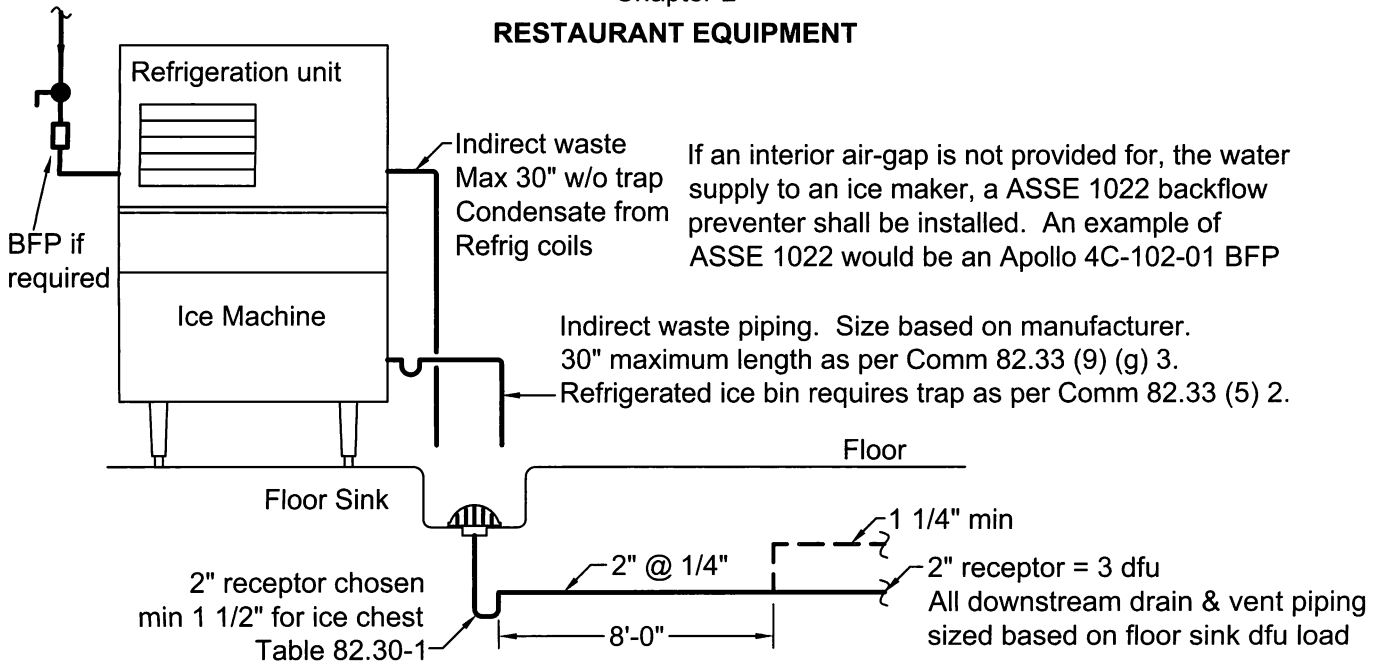


Water fill is above rim of hot food table and will not require back flow protection

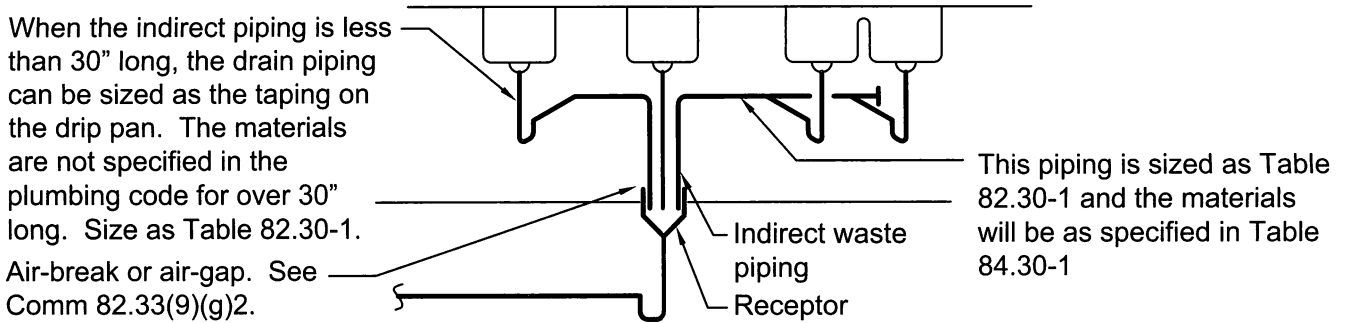


Provide trap on drain, 1" minimum. Extend 1" indirect waste to receptor drain. Drain air gap required.

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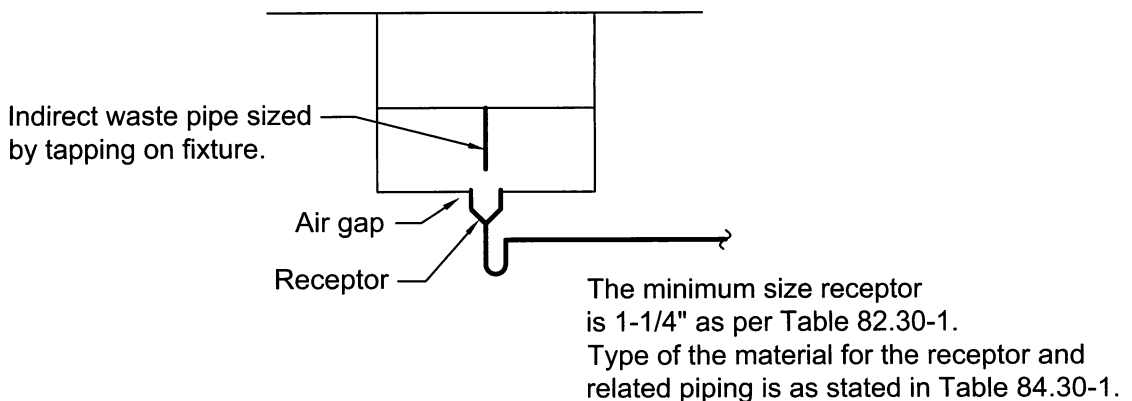


**DRIP PANS FOR** Coffee Makers, Beer Taps, Glass Fillers & Soda Dispensers



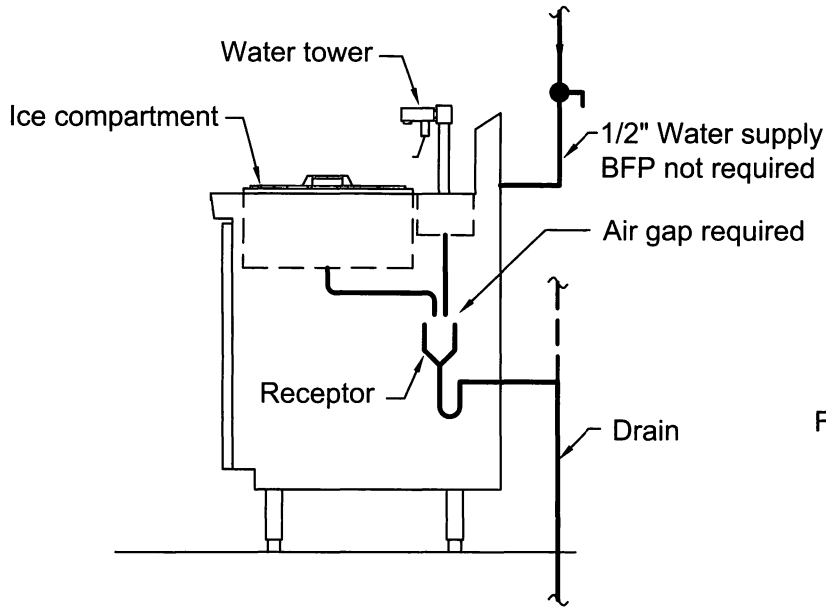
**ENCLOSED FOOD PROCESSING EQUIPMENT**

Such as coffee urns, egg boilers, potato peelers & steam kettles shall be provided with an air-gap. See Comm 82.33(9)(g)5.

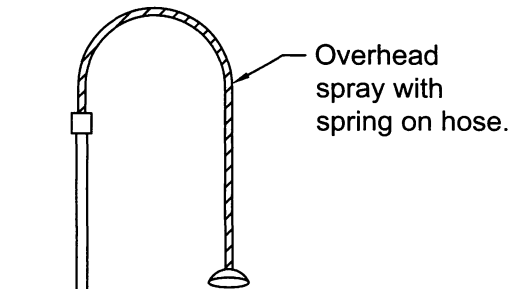


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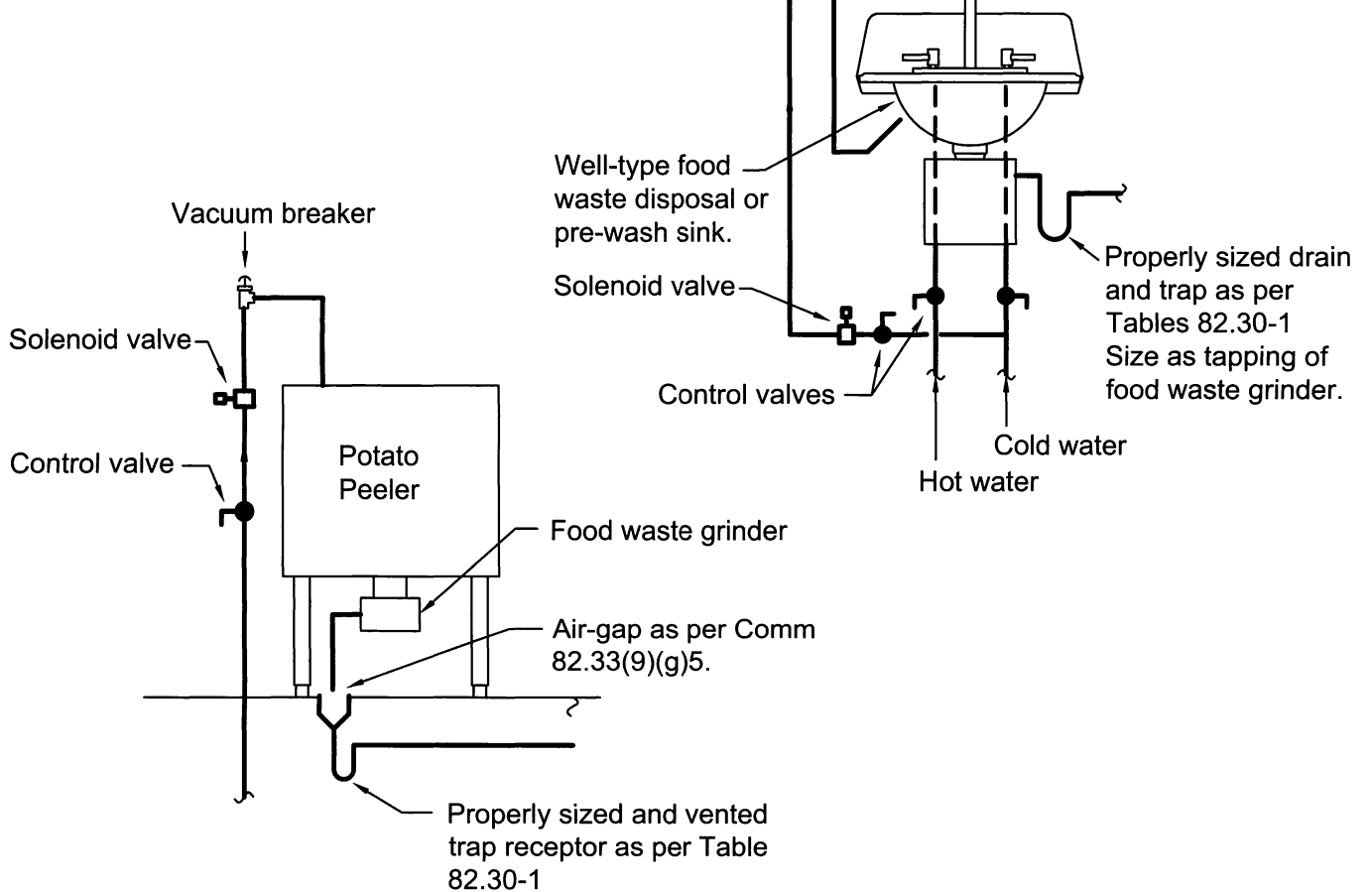
Waitress Station With Water Tower And Ice Compartment



Food Waste Disposal



Vacuum breaker 6" above flood level of rim of fixture



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**Questions & Answers**

- 1. Question:** If a chemical/soap dispenser is installed on a commercial dishwasher, where shall it be located?

**Answer:** The chemical/soap dispenser may be located anywhere but the pipe leading from the dispenser to the water supply must be located 6" below the vacuum breaker. Refer to the drawing in this chapter.
- 2. Question:** What type of drain shall be installed for the commercial dishwasher?

**Answer:** Refer to the drawings in this section and note that the drain must be installed above the floor and be provided with an air-gap or air break as part of the drain. See Table 82.30-1 which refers you to Note "c". The Note "c" under this Table recommends a drain size of 4".
- 3. Question:** May a commercial dishwasher which has a single water supply be installed?

**Answer:** Yes, provided that a commercial sanitation cycle is part of the dishwasher. The minimum temperature of the water shall not be less than 130° and the maximum is not recommended above 150°.
- 4. Question:** What should the temperature of the water be for a commercial dishwasher which does not have a chemical sanitation cycle?

**Answer:** The wash cycle shall be the same as in question #3 but the water temperature for the sanitation cycle shall be 180°.
- 5. Question:** When a restaurant operator installs a commercial dishwasher which will wash all of his utensils (in lieu of a three compartment sink), are there any other sink requirements?

**Answer:** When an operator chooses to install a commercial dishwashing machine in lieu of a three compartment scullery sink, an additional sink (NSF approved) may be necessary for food rinsing, vegetable washing, etc. The three compartment sink shall not be used for food rinsing or vegetable washing. In existing operations, food washing sinks may be required based on the type of food service. Hand washing sink or sinks are required in all eating establishments.
- 6. Question:** Where in the code book is information located about drips from pans, floor sinks and receptor information?

**Answer:** Drips and drain outlets Comm 82.33(9)(e)(air-gaps)  
Floor sinks Comm 82.33(8)(b)  
Drip pans for small appliances Comm 82.33(9)(g)2.  
Enclosed food processing equipment Comm 82.33(9)(g)5.
- 7. Question:** When a food prep sink is installed, what type of drain connection is required?

**Answer:** The drain from the food prep sink shall discharge into a trap with an air-gap connection.

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**8. Question:** When are hand sinks required in an establishment serving food?

**Answer:** Hand sinks may be required by the health agency serving your area in various areas of the kitchen and serving area. One area where a hand sink may be required is the cooking area, another in food prep area and another where the person handling money is also handling food. Check with your local health agency for your kitchen/food serving establishment requirements.