

**Restaurant Equipment Quiz****Instructions****Fees: \$30**

1. Print these pages.
2. Answer the **Simple questions** that follow mini sections of the code language.
3. Circle the correct answers and transfer the answers to the [answer sheets](#) (see last 3 pages).
4. After answering the simple questions you will become familiar with the new code changes.
5. Page down to the last page for the [verification form](#), answer sheets and mailing instructions.

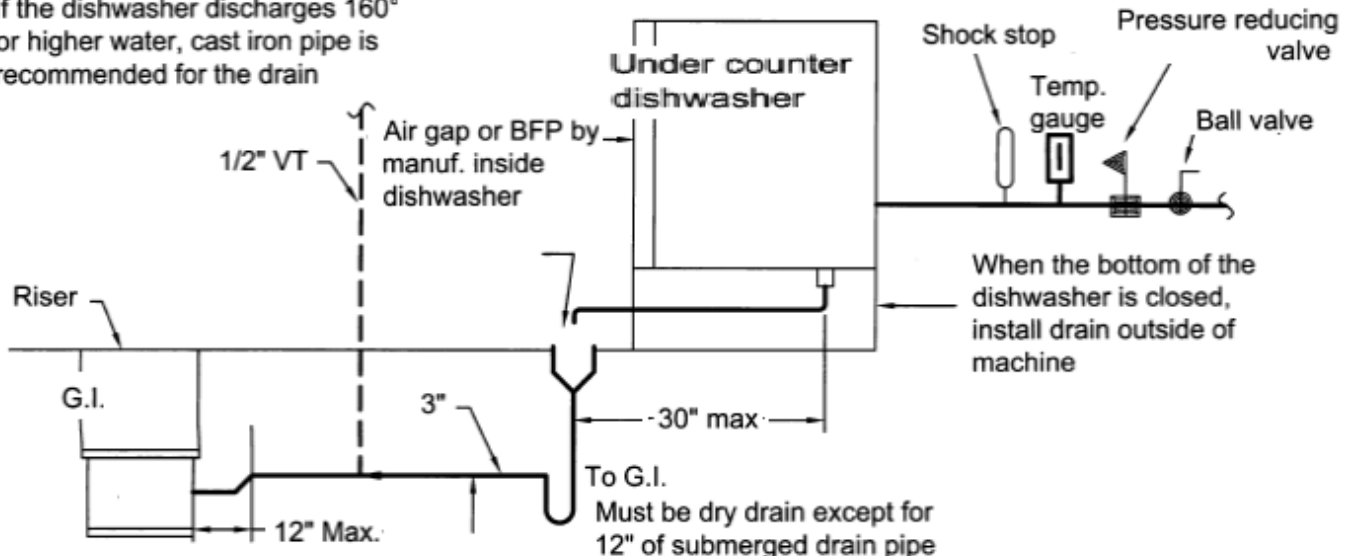
**3 hour course for:**

- |                                  |  |
|----------------------------------|--|
| 1. Master Plumber                | 4. UDC Plumbing Inspector                  |
| 2. Journeyman Plumber            | 5. Master Plumber Restricted Appliance     |
| 3. Commercial Plumbing Inspector | 6. Journeyman Plumber Restricted Appliance |

? Call Amy or Gary Klinka at 920-727-9200 or 920-740-4119 or 920-740-6723 [garyklinka@hotmail.com](mailto:garyklinka@hotmail.com)

**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.

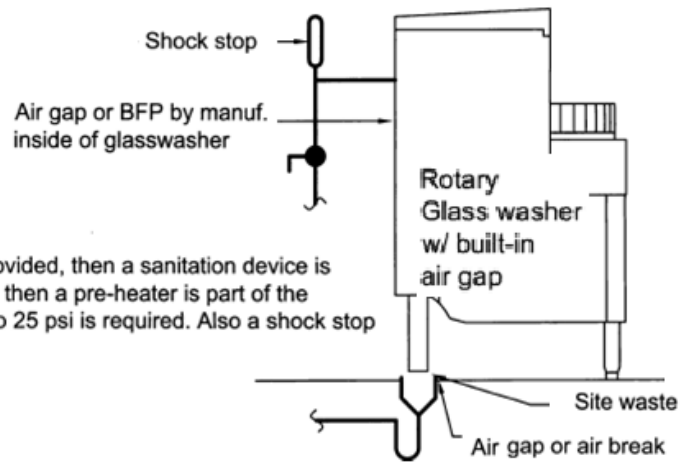
When the drain is in the floor, it may be installed under the machine (if accessible) or to one side or the other as shown above. Access to the drain is required and when the drain is in the wall or above floor, a pump type dishwasher is required. The top of the drain which receives the discharge from 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.

1. When the above dishwasher drain is in the floor, it may be installed under the machine only if it is \_\_\_\_\_.  
  - a. available
  - b. accessible
  - c. both a & b
  - d. none of the above
2. Access to the above dishwasher drain is required and when the drain is in the wall or above floor, a \_\_\_\_\_ dishwasher is required.

- a. gravity
- b. pressure
- c. pump
- d. all of the above

3. Some dishwashing machines will only pump 12" high but others can pump up to \_\_\_" high.

- a. 18
- b. 24
- c. 36
- d. 42



**Water Options**

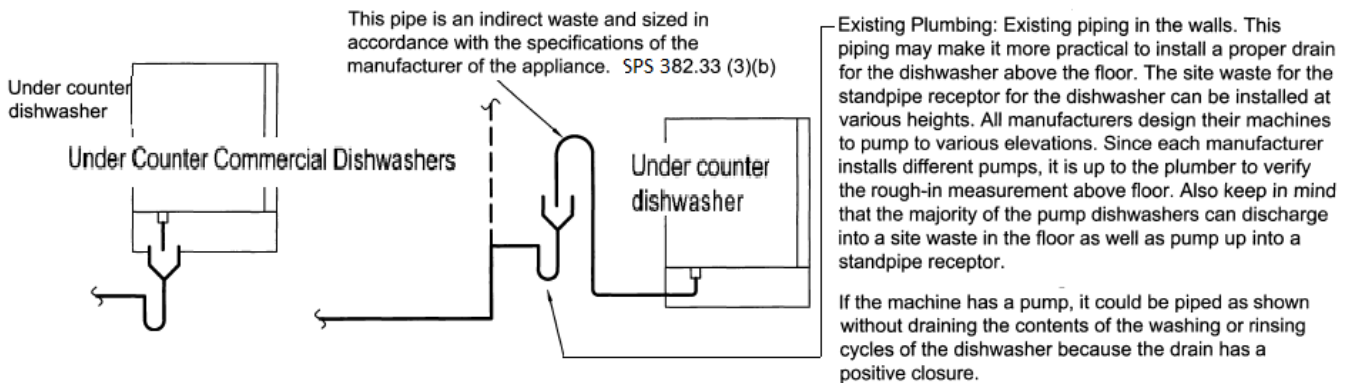
Hot water for dishwashers can be 180° or 140°. If 140° water is provided, then a sanitation device is provided for the dishwasher. In most machines, if 180° is required, then a pre-heater is part of the machine. A pressure reducing valve reducing the water pressure to 25 psi is required. Also a shock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

4. A pressure reducing valve reducing the water pressure to 25 psi is \_\_\_\_\_ for the above figure.

- a. recommended
- b. optional
- c. required
- d. all of the above

5. A \_\_\_\_\_ should be part of the installation.

- a. shock stop
- b temperature gauge
- c. neither a or b
- d. both a or b

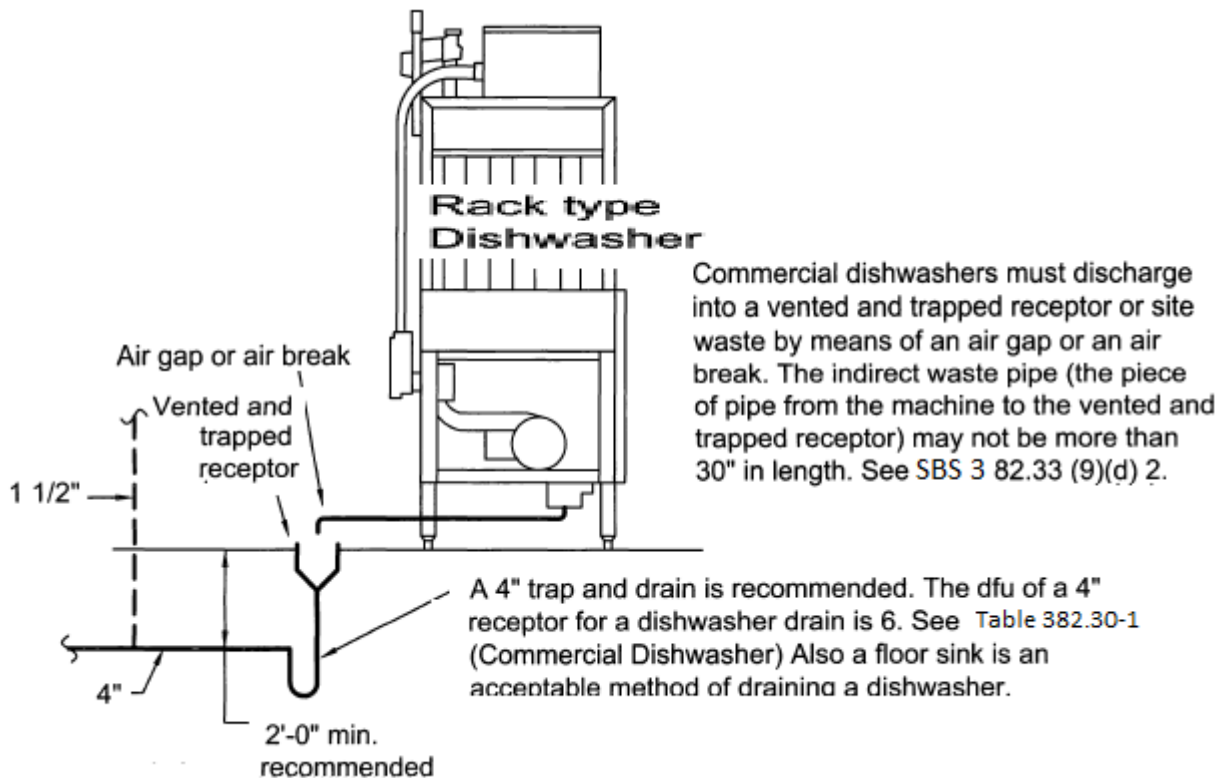


6. Existing Plumbing: All manufacturers design their machines to pump to various elevations. Since each manufacturer installs different pumps, it is up to the \_\_\_\_\_ to verify the rough-in measurement above floor.

- Inspector
- owner
- plumber
- any of the above

7. Existing Plumbing: The majority of the pump dishwashers can discharge into a \_\_\_\_\_.

- site waste in the floor
- standpipe receptor (pump up)
- both a & b
- none of the above



8. The indirect waste pipe (the piece of pipe from the machine to the vented and trapped receptor) may not be more than \_\_\_ in length.

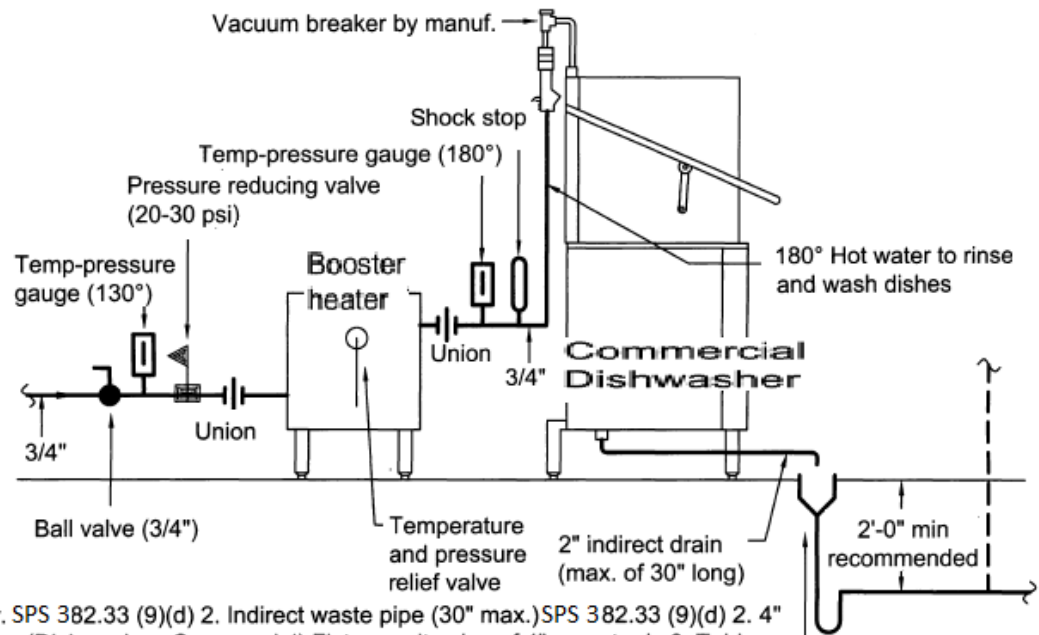
- 30"
- 30'
- 36"
- 48"

9. Commercial dishwashers must discharge into a vented and trapped receptor or site waste by means of an \_\_\_\_\_.

- air gap
- air break
- both a or b
- none of the above

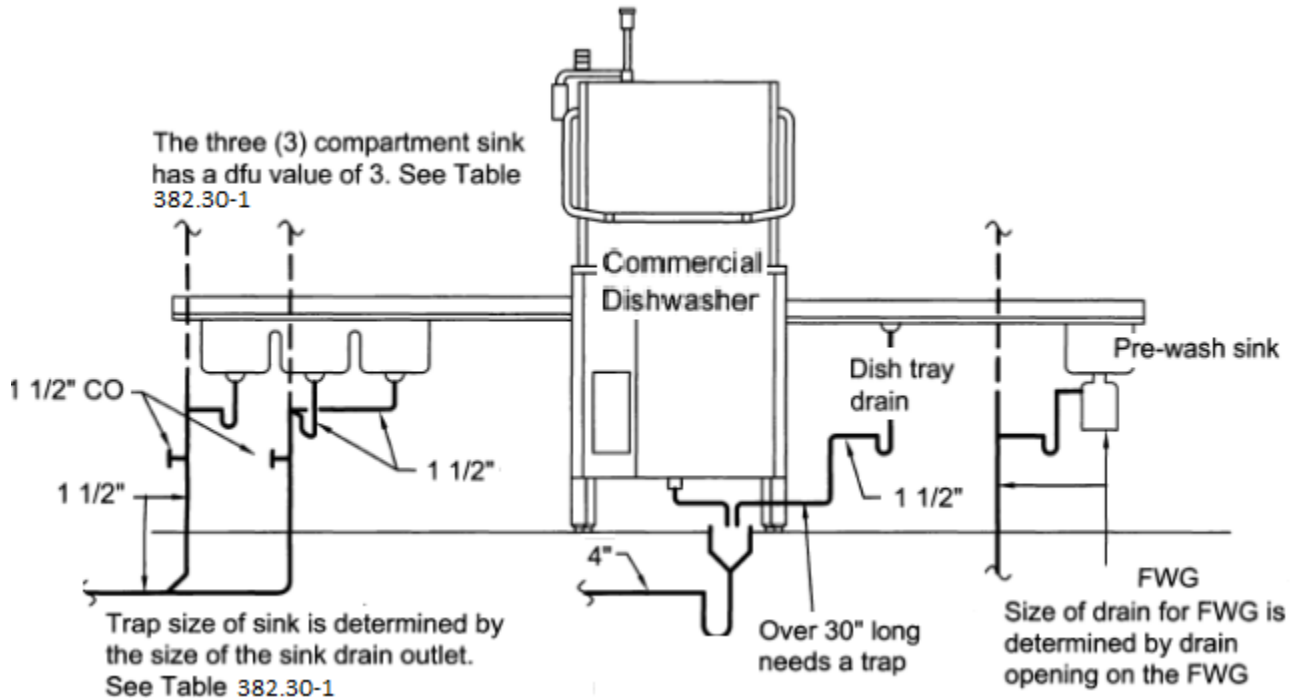
10. A floor sink is not acceptable method of draining a dishwasher.

- true
- false

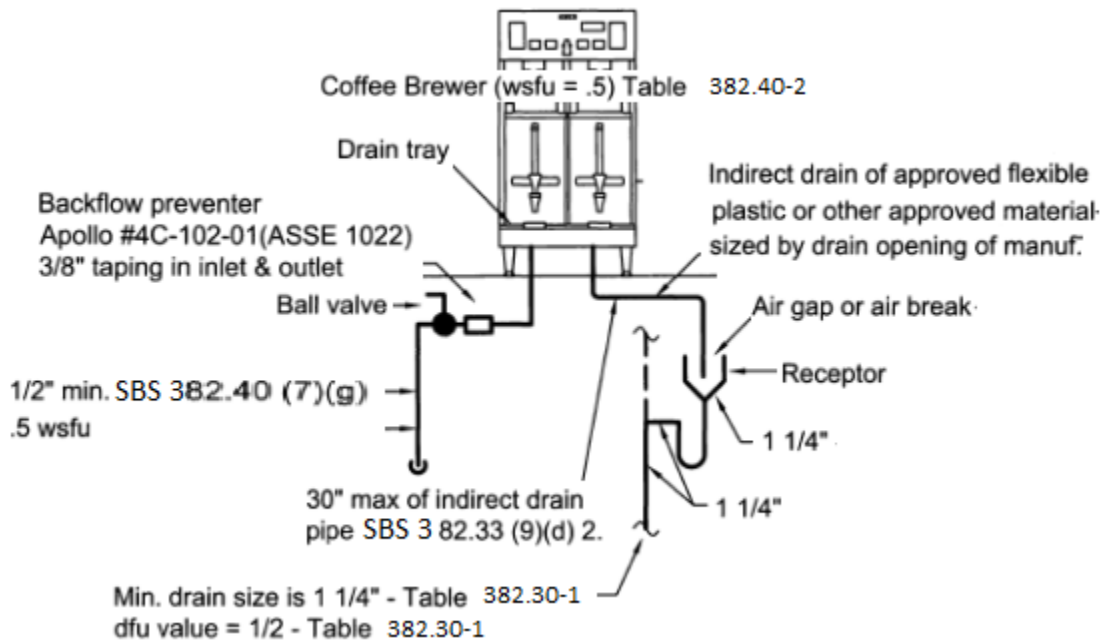


Vented and trapped receptor. SPS 382.33 (9)(d) 2. Indirect waste pipe (30" max.) SPS 382.33 (9)(d) 2. 4" Minimum drain - Table 382.31-1 (Dishwasher, Commercial) Fixture unit value of 4" receptor is 6. Table 382.31-1 Minimum size vent - Table 382.31-1 Minimum drain size of dishwasher receptor - Table 382.31-1.

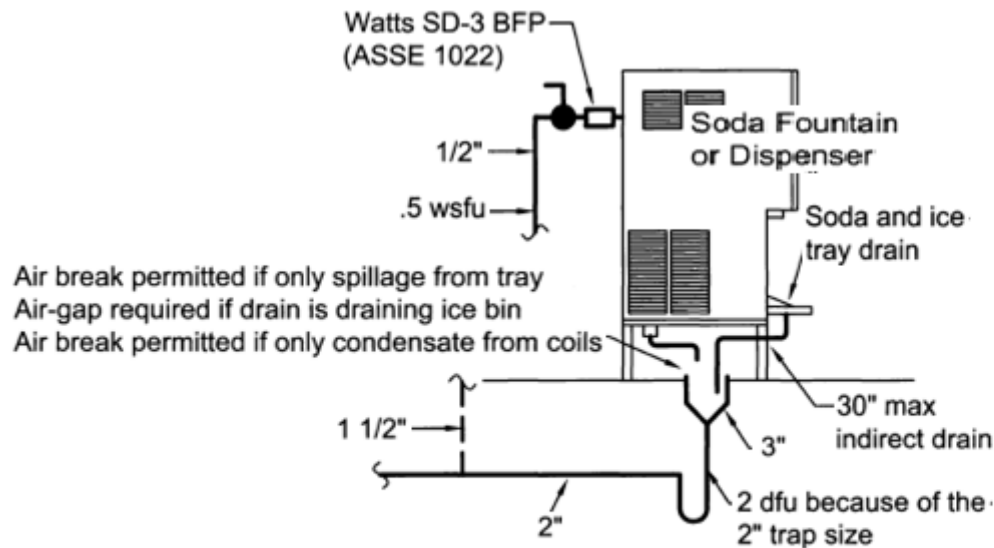
11. The code section for the minimum drain size of dishwasher receptor would be table \_\_\_\_\_.
  - a. 82.30-1
  - b. 82.33(9)(d)2
  - c. 82.31-3
  - d. 82.33-2
12. The code section for Vented and trapped receptor would be table \_\_\_\_\_.
  - a. 82.30-1
  - b. 82.33(9)(d)2
  - c. 82.31-3
  - d. 82.33-2
13. The code section for the minimum size vent would be table \_\_\_\_\_.
  - a. 82.30-1
  - b. 82.33(9)(d)2
  - c. 82.31-3
  - d. 82.33-2



14. Trap size of sink is not determined by the size of the sink drain outlet.
- a. true
  - b. false



15. The above beverage machine does not need backflow protection by code.
- a. true
  - b. false



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.

16. If it is draining a condensate area of the Dispenser, it would be permitted to drain by means of an

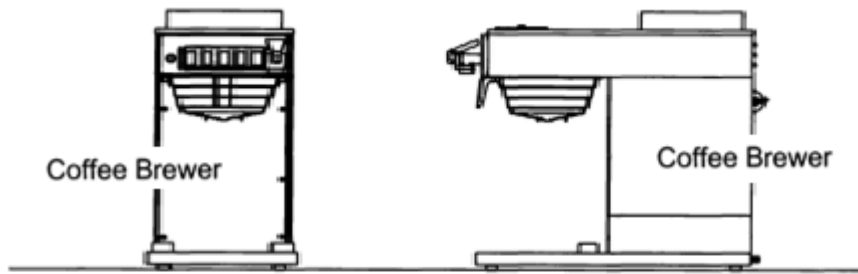
- \_\_\_\_\_.
- a. air break
  - b. air gap
  - c. both a or b
  - d. backflow preventer

17. The second drain discharging from the bottom of the Dispenser must discharge by means of an \_\_\_\_\_ if it is draining an ice bin or similar.

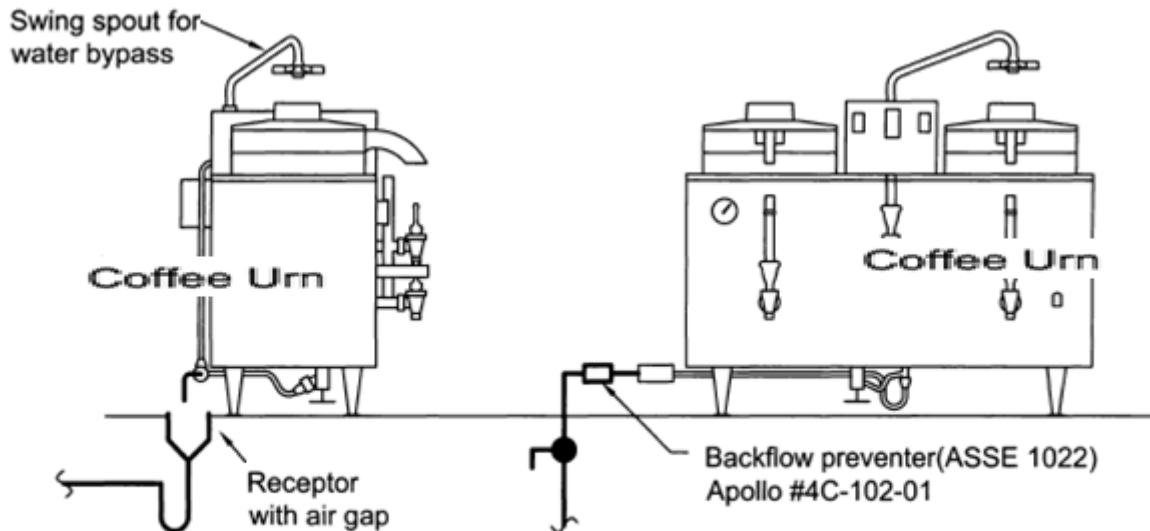
- a. air break
- b. air gap
- c. both a or b
- d. backflow preventer

18. The drain from the soda & ice tray is draining spillage and is permitted to discharge by means of an

- \_\_\_\_\_.
- a. air break
  - b. air gap
  - c. both a or b
  - d. backflow preventer
-



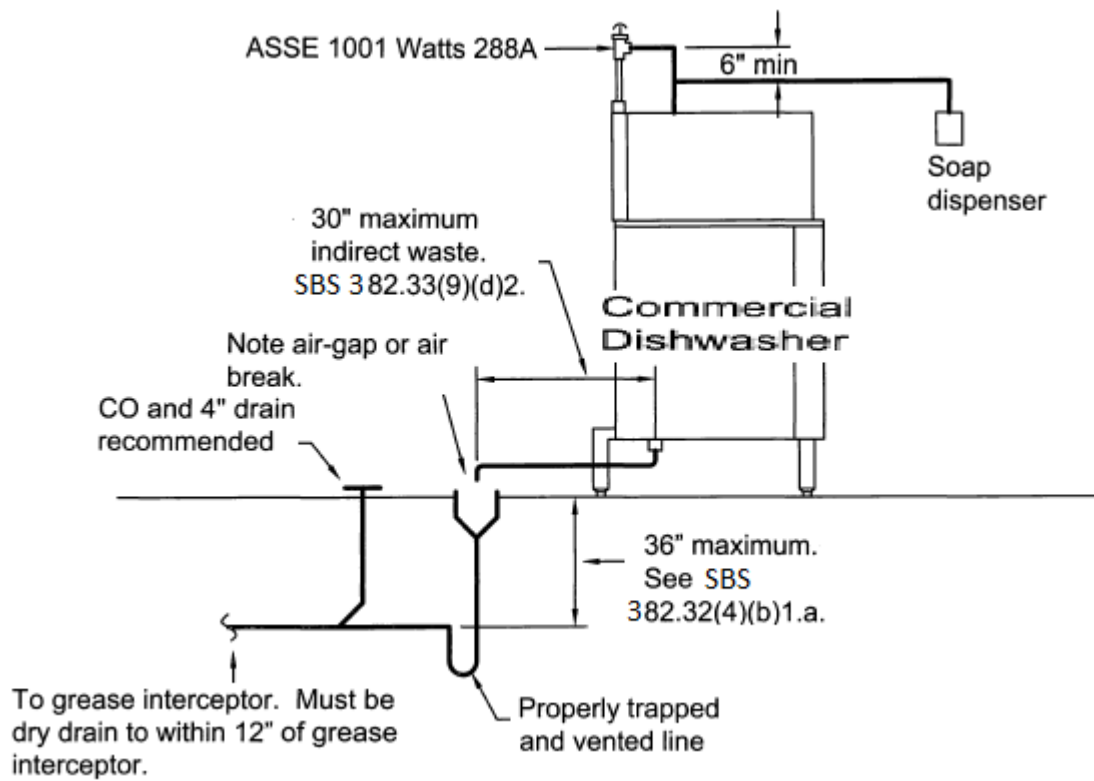
Coffee Brewer (automatic coffee brewer) Some units are provided with a hot water faucet. Requires an ASSE 1022 backflow preventer. IE: Apollo No. 4C-102-01  
 Plumbing: 20-80 psi. Machine supplied with 1/4" male flare fitting



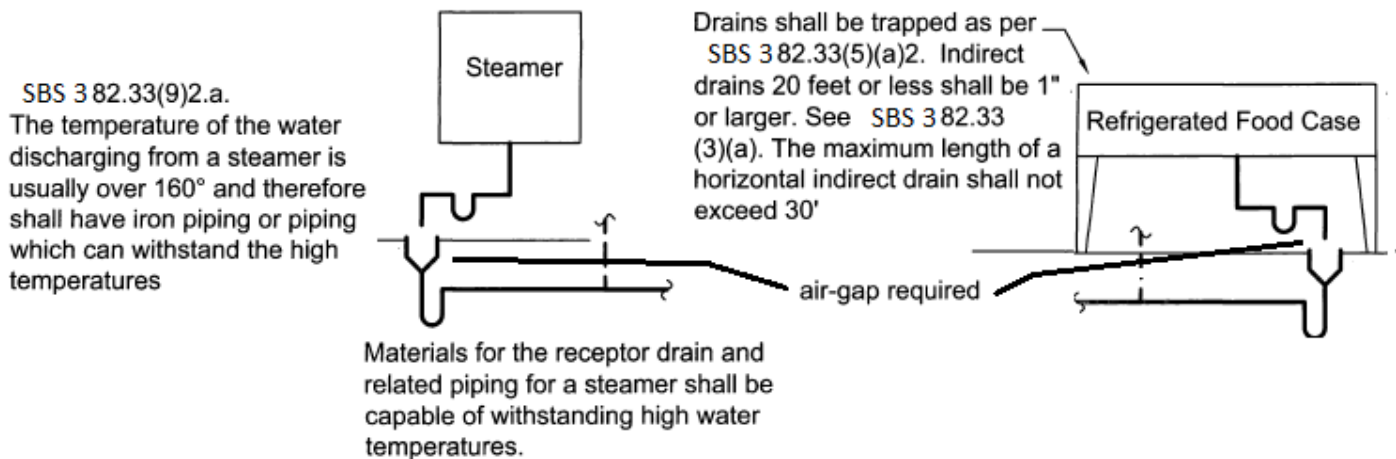
Coffee urn with 3/8" male fitting. The model shown is with a swing spout for water by-pass, water connection at side and back of unit. Requires an ASSE 1022 back flow preventer. IE: Apollo No. 4C-102-01. Provide an air-gap on the drain. Install a filtering device if required.

19. Coffee Urn: Must be provided with an \_\_\_\_\_ the drain.
  - a. air break
  - b. air gap
  - c. both a or b
  - d. backflow preventer
20. Automatic coffee urn must be provided with an \_\_\_\_\_ at the receptor.
  - a. air break
  - b. air gap
  - c. both a or b
  - d. backflow preventer
21. A filter device for a \_\_\_\_\_ is required.
  - a. automatic coffee brewer
  - b. coffee urn
  - c. both a & b
  - d. none of the above





22. The drain from a commercial dishwasher is permitted to discharge by means of an \_\_\_\_\_.
- air break
  - air gap
  - both a or b
  - backflow preventer



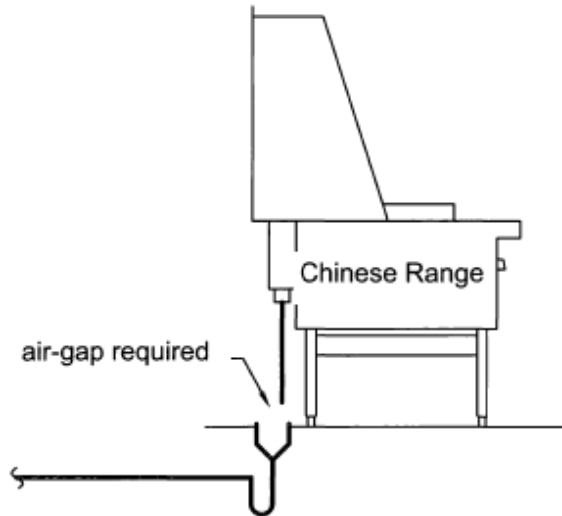
23. Materials for the receptor drain and related piping for a steamer **could** be capable of withstanding high water temperatures.
- true
  - false
24. Indirect drains for a refrigerated food cases shall be \_\_\_\_\_” for drains 20’ or less.
- 1/2
  - 3/4



- c. 1
- d. 1 1/4

25. The temperature of the water discharging from a steamer is usually over 160° and therefore shall have \_\_\_\_\_.

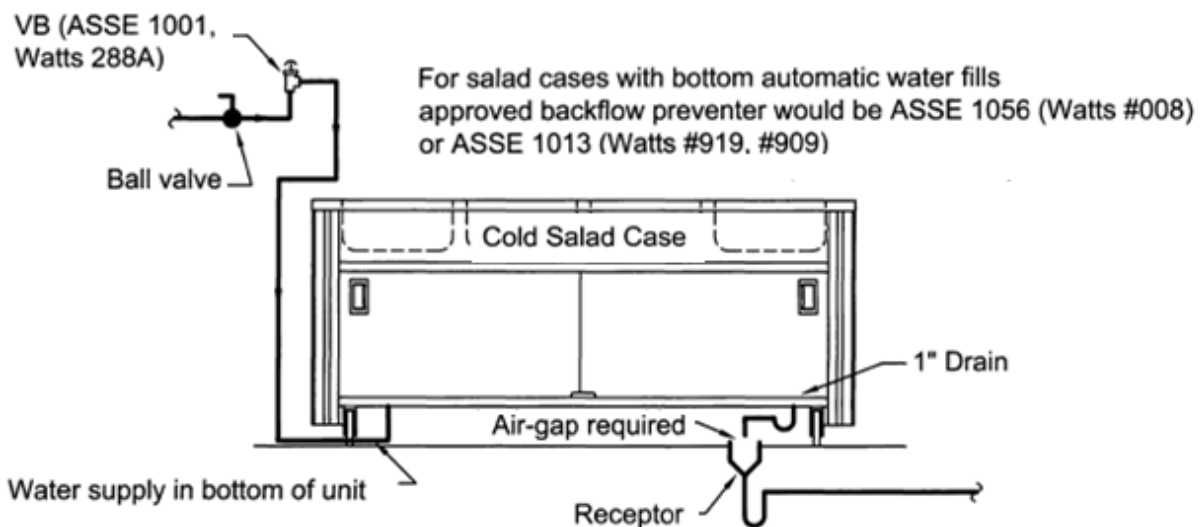
- a. piping which can withstand the high temperatures
- b. iron piping
- c. any metal piping method
- d. both a & b



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.

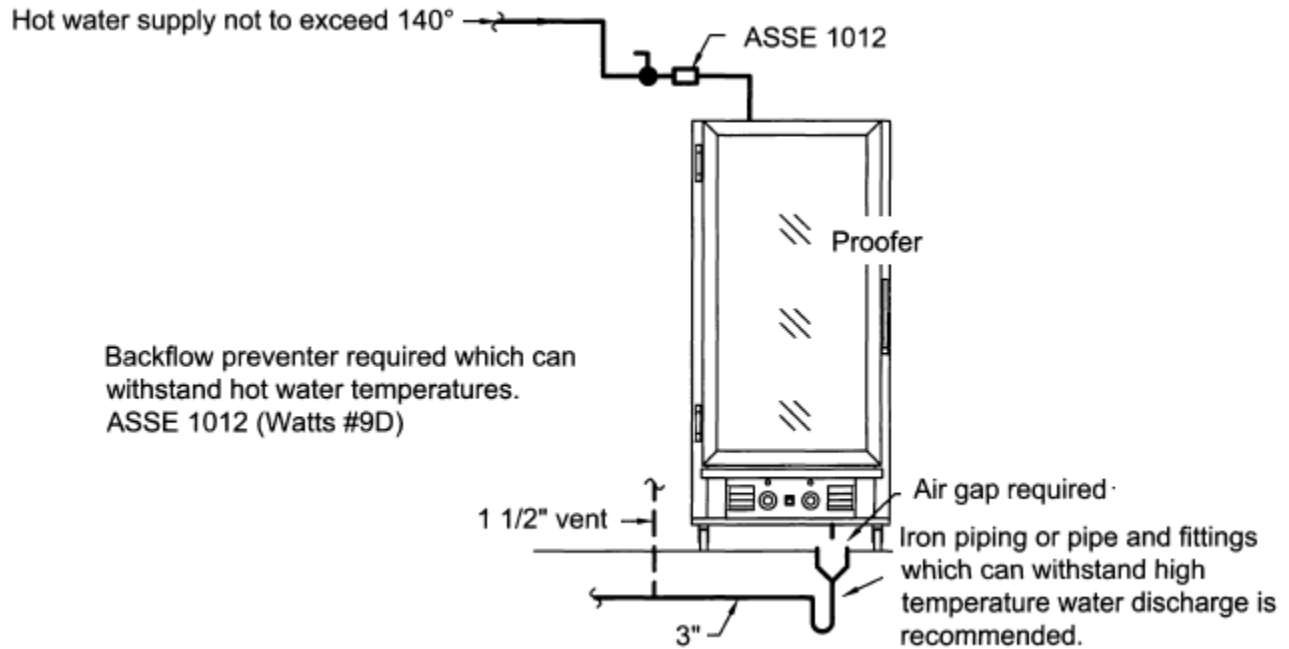
26. Chinese ranges that are provided with multiple frying kettles and multiple faucets with 1/2" water piping \_\_\_\_\_ to serve those faucets would be acceptable to the Department of Commerce if all other codes are met.

- a. field install
- b. installed at the factory
- c. none of the above
- d. both a & b



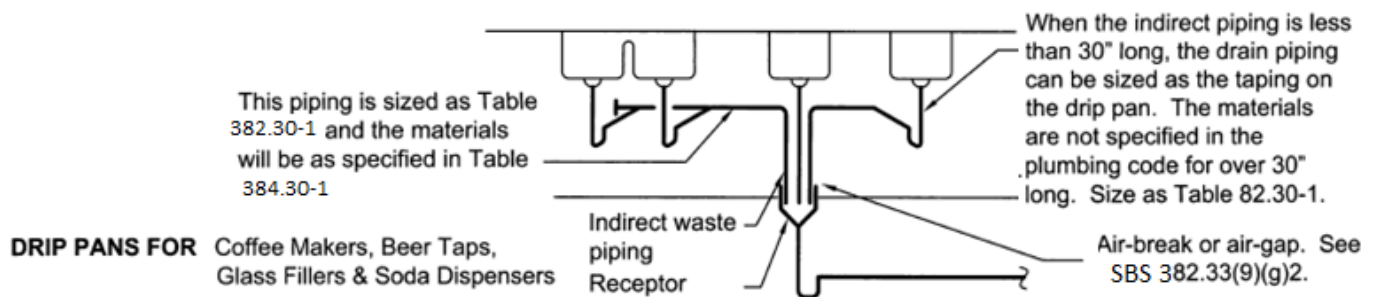
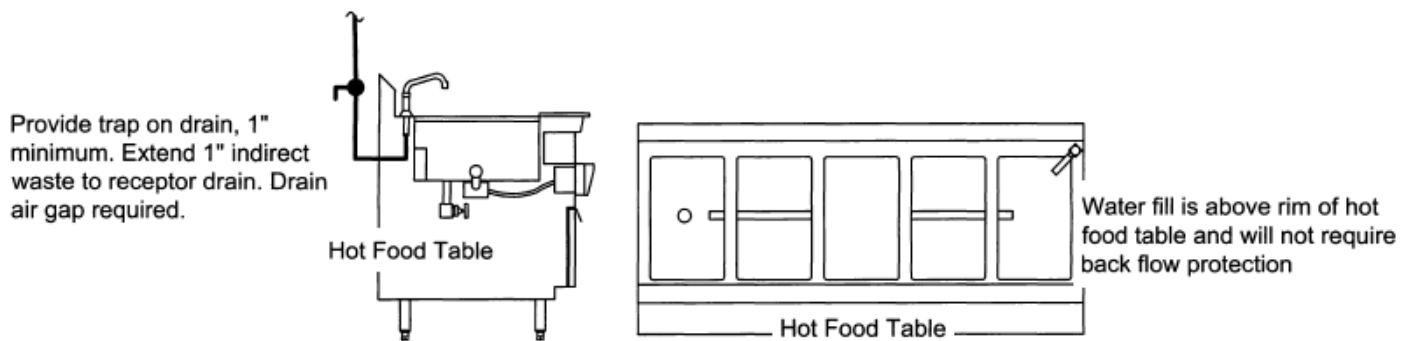
27. Salad cases with top automatic water fills approved backflow preventer would be ASSE 1056 or ASSE 1013.

- a. true
- b. false



28. The hot water supply to a proofer should not exceed \_\_\_\_ degrees.

- a. 120
- b. 140
- c. 160
- d. none of the above



29. The drains for above diagram can discharge by the means of \_\_\_\_\_.

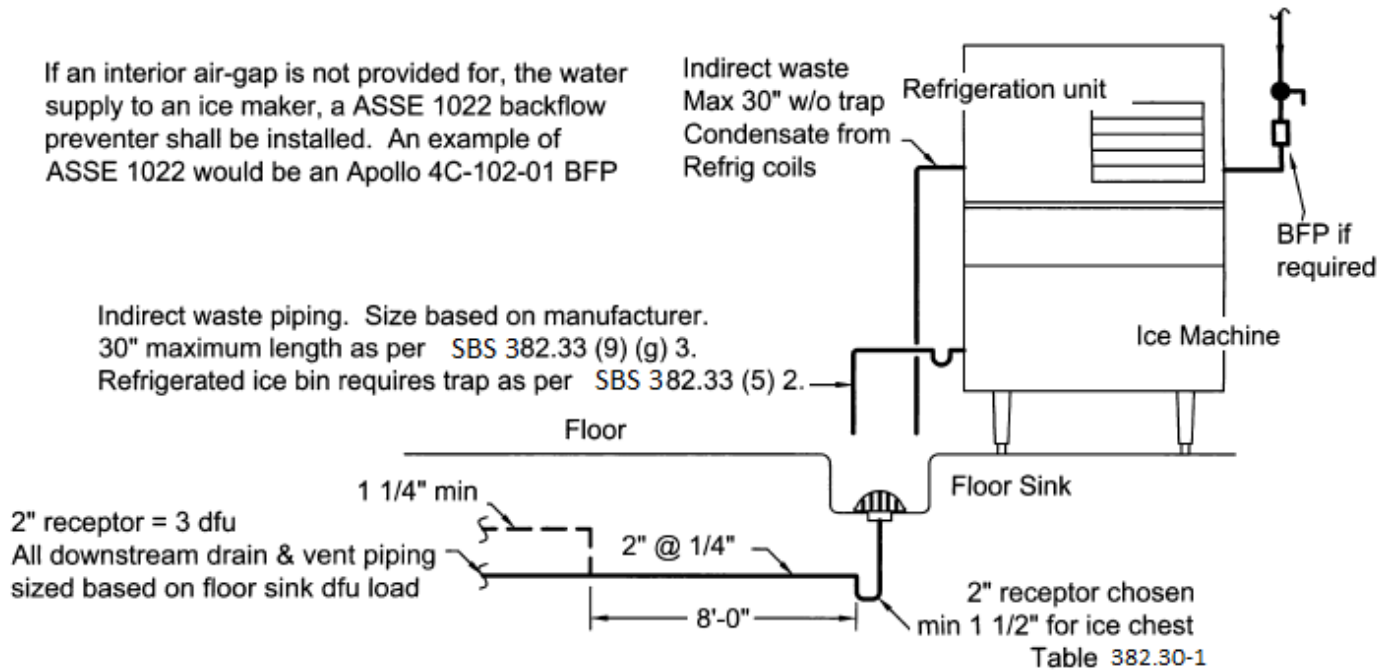
- a. air break
- b. air gap

- c. both a or b
- d. backflow preventer

If an interior air-gap is not provided for, the water supply to an ice maker, a ASSE 1022 backflow preventer shall be installed. An example of ASSE 1022 would be an Apollo 4C-102-01 BFP

Indirect waste  
Max 30" w/o trap  
Condensate from  
Refrig coils

Indirect waste piping. Size based on manufacturer.  
30" maximum length as per SBS 382.33 (9) (g) 3.  
Refrigerated ice bin requires trap as per SBS 382.33 (5) 2.



30. If an interior air-gap is not provided for the above diagram, the water supply to an ice maker, a ASSE \_\_\_\_\_ backflow preventer shall be installed.
- a. 1021
  - b. 1022
  - c. 1012
  - d. none of the above

**Restaurant Equipment Quiz-Answer Sheet**

- |           |         |           |         |           |         |
|-----------|---------|-----------|---------|-----------|---------|
| <u>1</u>  | a b c d | <u>11</u> | a b c d | <u>21</u> | a b c d |
| <u>2</u>  | a b c d | <u>12</u> | a b c d | <u>22</u> | a b c d |
| <u>3</u>  | a b c d | <u>13</u> | a b c d | <u>23</u> | a b c d |
| <u>4</u>  | a b c d | <u>14</u> | a b c d | <u>24</u> | a b c d |
| <u>5</u>  | a b c d | <u>15</u> | a b c d | <u>25</u> | a b c d |
| <u>6</u>  | a b c d | <u>16</u> | a b c d | <u>26</u> | a b c d |
| <u>7</u>  | a b c d | <u>17</u> | a b c d | <u>27</u> | a b c d |
| <u>8</u>  | a b c d | <u>18</u> | a b c d | <u>28</u> | a b c d |
| <u>9</u>  | a b c d | <u>19</u> | a b c d | <u>29</u> | a b c d |
| <u>10</u> | a b c d | <u>20</u> | a b c d | <u>30</u> | a b c d |

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Course Title and Name \_\_\_\_\_ Restaurant Equipment Quiz \_\_\_\_\_

List each credential held by attendee \_\_\_\_\_

\_\_\_\_\_ Credited Hours 3 hrs. Fee: \$30

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Attendee passed the course with a greater than 70% score on Date \_\_\_\_\_

Instructor Signature \_\_\_\_\_