

Chapter 8

Indirect Waste



Indirect Waste Handling Food or Beverages

- Purpose:
 - To prevent the possibility of wastes backing up into a compartment where food is being stored or being processed and contaminating it:
 - This can cause a severe health hazard



Definition

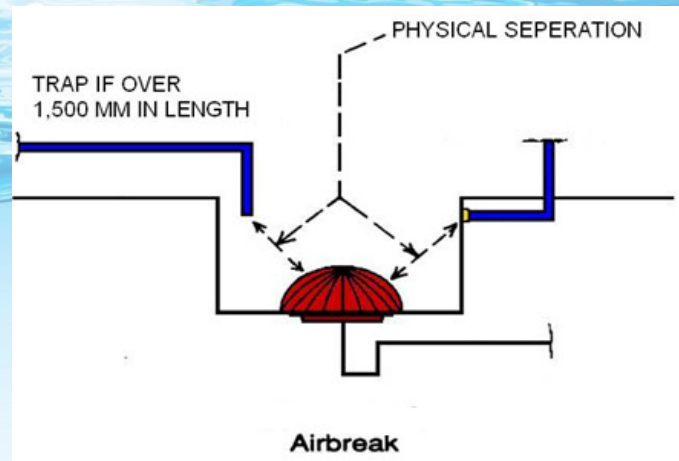
Indirect Waste Pipe

A pipe that does not connect directly with the drainage system but conveys liquid wastes by discharging into a plumbing fixture, interceptor, or receptacle that is directly connected to the drainage system.

Definition

Airbreak

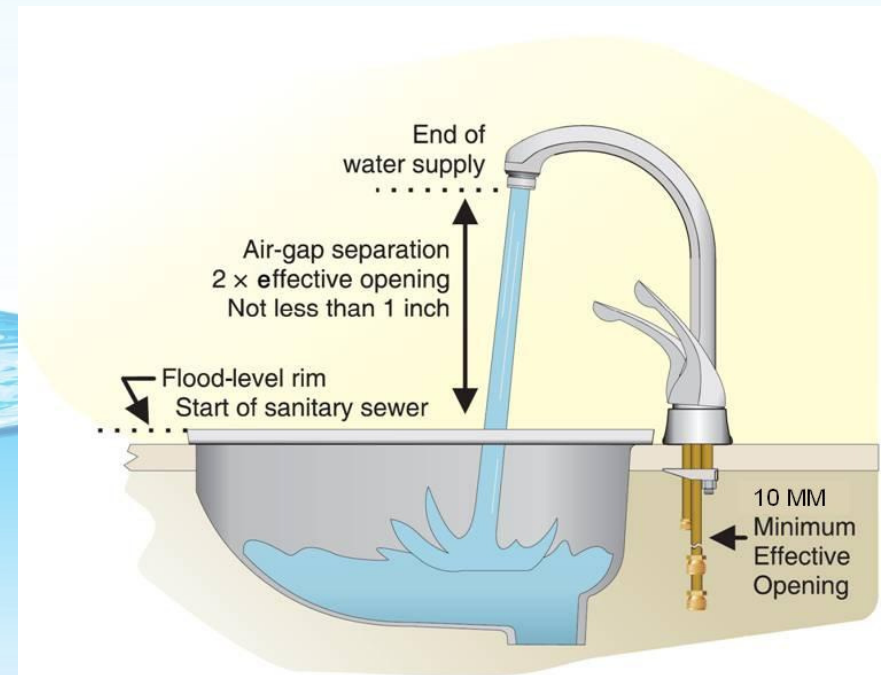
- Is a physical separation which may be a low inlet into the waste receptor
- Does not connect directly with the drainage system



Definition

Air Gap, Water Distribution

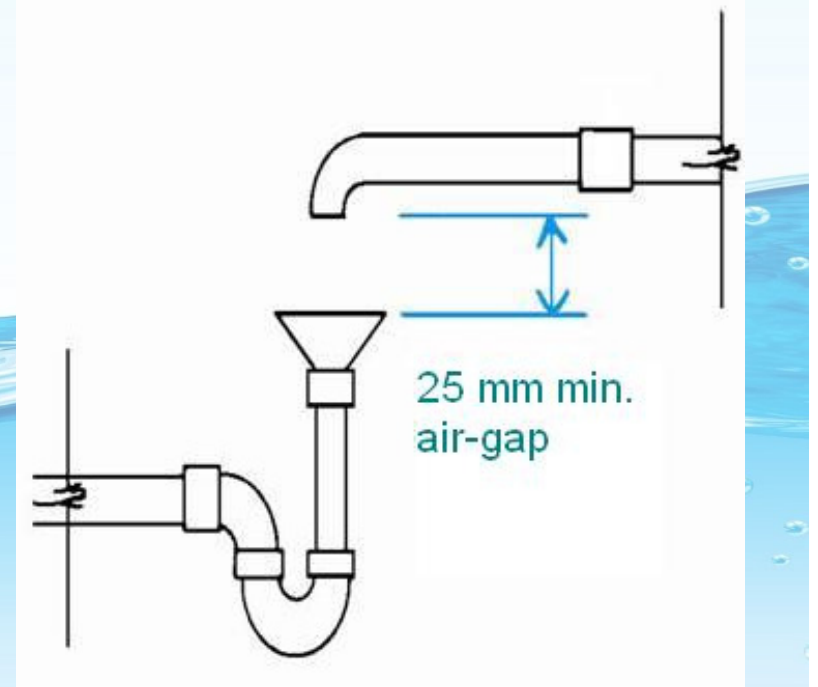
- The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying potable water to the flood level rim of any tank, basin or fixture



Definition

Airgap, Drainage

- The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe, plumbing fixture, appliance, or appurtenance conveying waste to the flood level rim of the receptor.



Airgap or Airbreak Required

- Indirect waste piping shall discharge into the building drainage system through an Airgap or Airbreak
 - Airgap - the minimum vertical distance measured from the lowest point to the flood-level rim of the receptor shall not be less than 25 mm.

Food & Beverage Handling Establishments

Indirect waste piping shall be provided for:

Refrigerators

Refrigeration Coils

Freezers

Walk-In Coolers

Iceboxes

Dispensers

Steam Tables

Egg Boilers

Coffee Urns

Coffee Brewers

Hot/Cold Drink

Ice-Making Machines

And Similar Equipment



Ice Making Machine

Drain Connections to be indirect

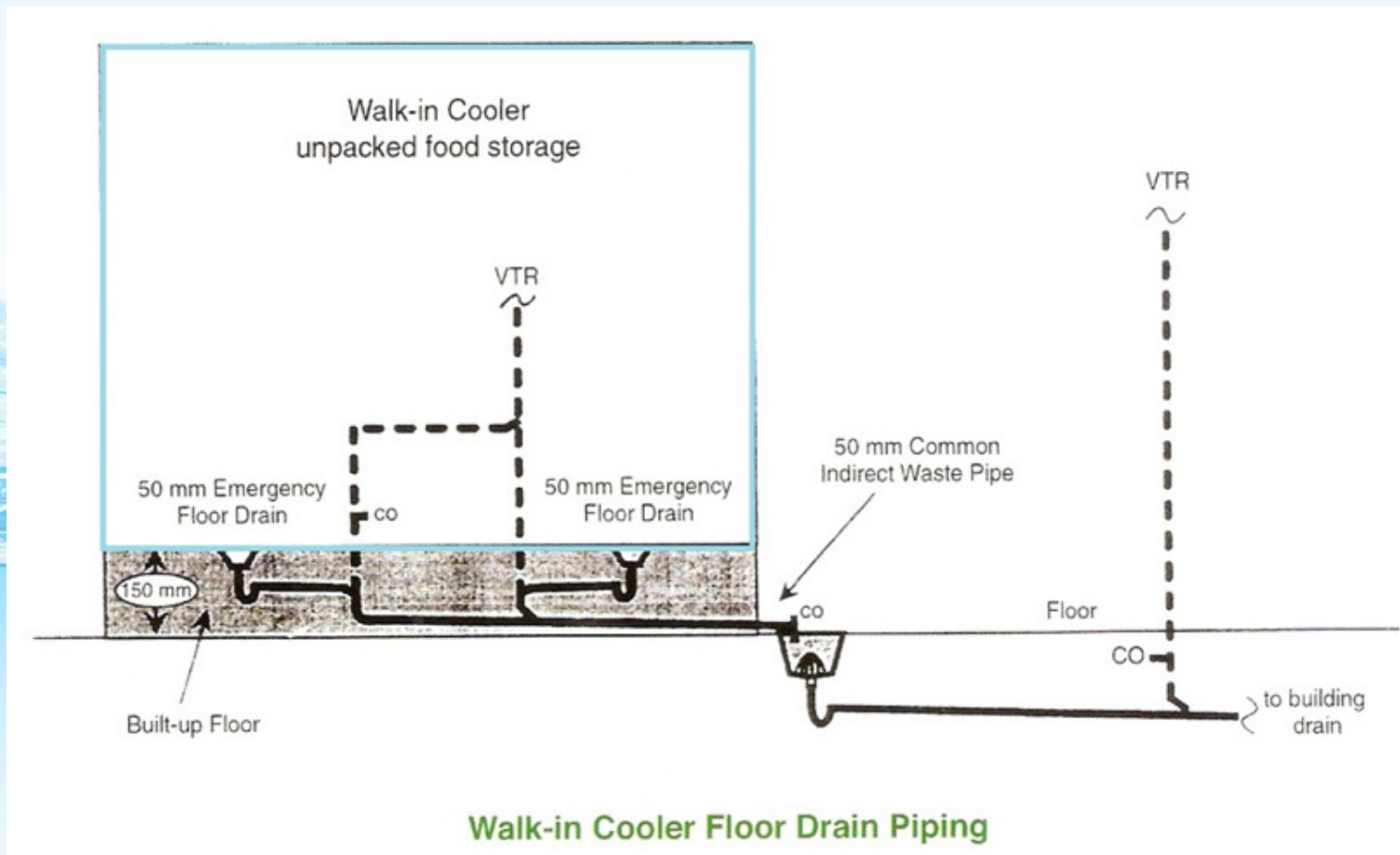
Walk in Cooler



Walk in Cooler Floor Drain Piping

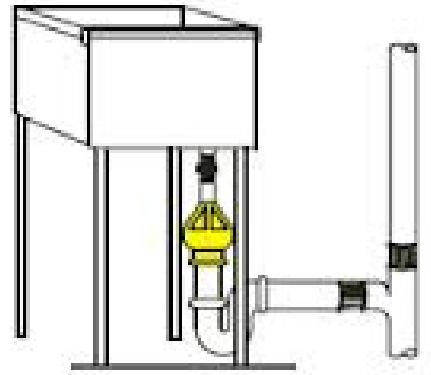
- Floor drains in walk-in coolers may connect to a separate drainage line discharging into an outside receptor.
- The flood-level rim of the receptor shall be not less than 150 mm lower than the floor drains.
- Cleanouts shall be provided at every 90-degree change in direction.

Walk in Cooler Floor Drain Piping



Indirect Waste Piping for Food Preparation Sinks

- Shall be indirectly connected by means of an airgap.
- Pipe size not smaller than the drain but not less than 15 mm.

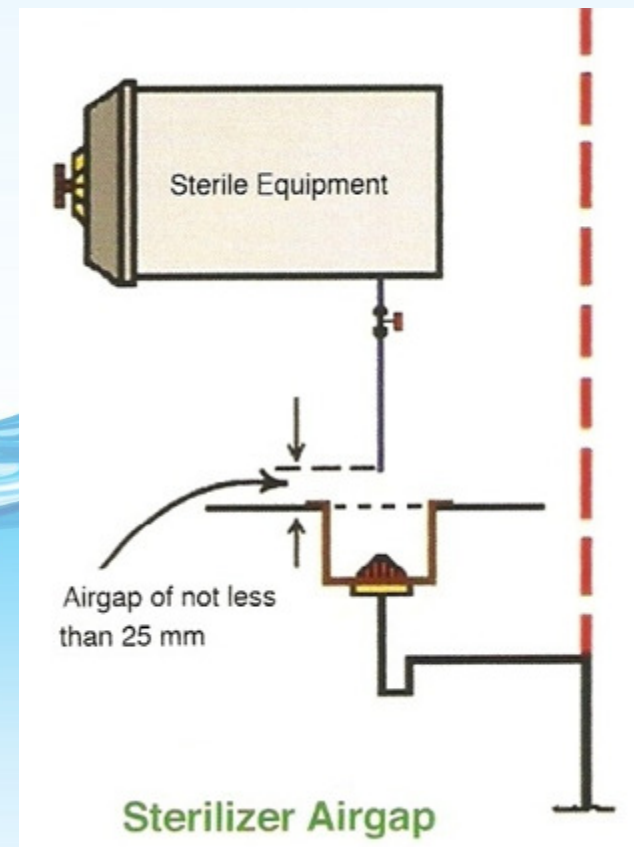


Connections from Water Distribution Systems

- Indirect waste connections shall be provided for drains, overflows, or relief pipes from potable water pressure tanks, water heaters, boilers, and similar equipment that is connected to the potable water distribution system.
- Such indirect waste connections shall be made by means of a water-distribution airgap constructed in accordance with Table 603.2.1.

Sterilizers

- Shall be indirectly connected by means of a water- distribution airgap.
- Each device shall be separately piped
- The developed length shall not exceed 1,500 mm.



Indirect Waste Piping



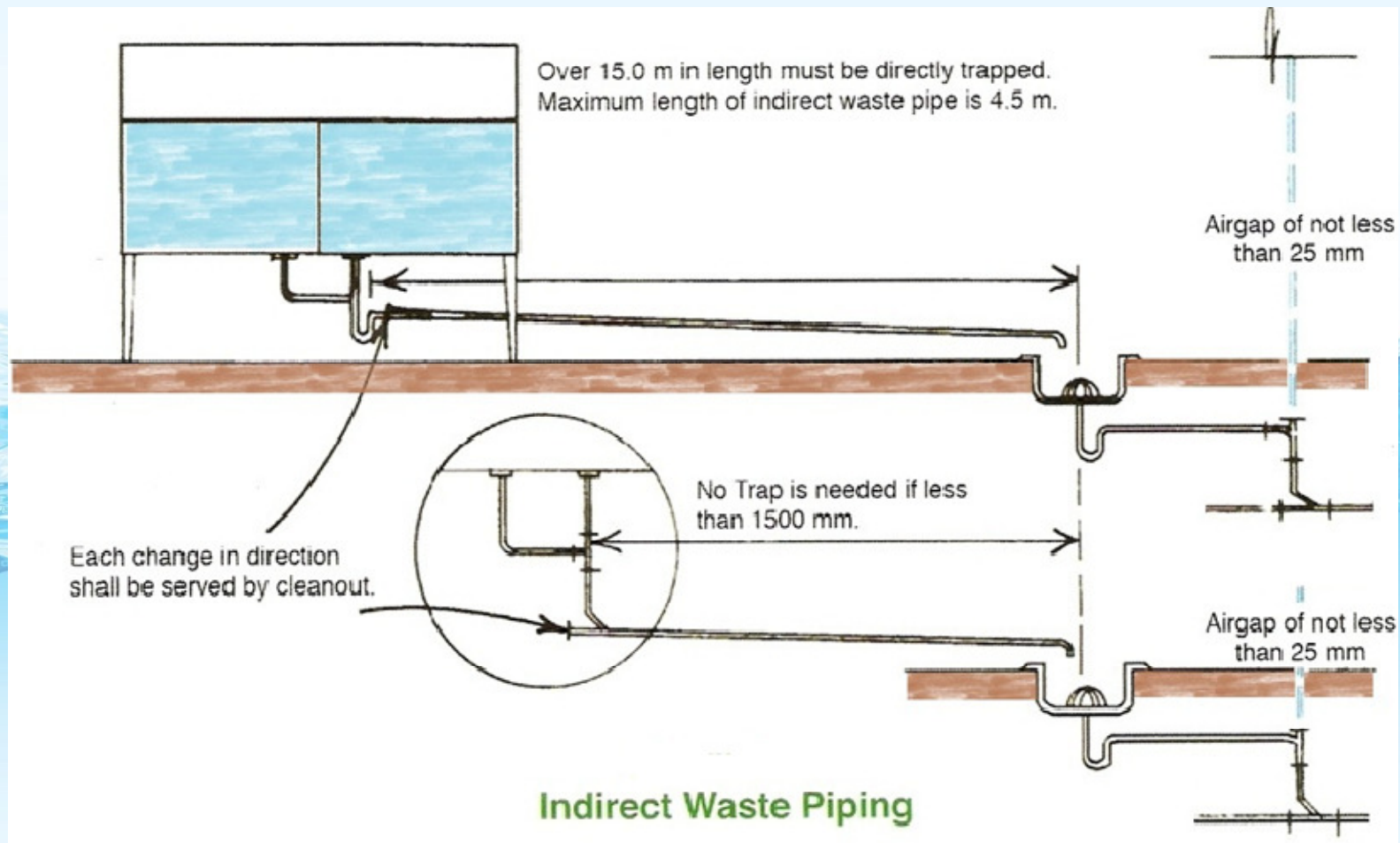
Indirect Waste Piping

- Construction of indirect waste piping shall be in accordance with the code
- Vents from indirect waste piping shall not be combined with any sewer connected vent

Indirect Waste Piping

- Indirect waste pipes exceeding 1,500 mm, but less than 4,500 mm in length shall be directly trapped, but does not need to be vented.
- Indirect waste pipes less than 4,500 mm in length shall be not less than the diameter of the drain outlet.
- In no case less than 15 mm in size.

Length of Indirect Waste Piping



Indirect Waste Receptors

All indirect receptors to:

- Prevent splashing and flooding
- Located where they are readily accessible for inspection and cleaning
- Shall not be located in a toilet room, closet, cupboard, storeroom or any room not in general use by occupants

Indirect Waste Receptors



Indirect Waste Receptors

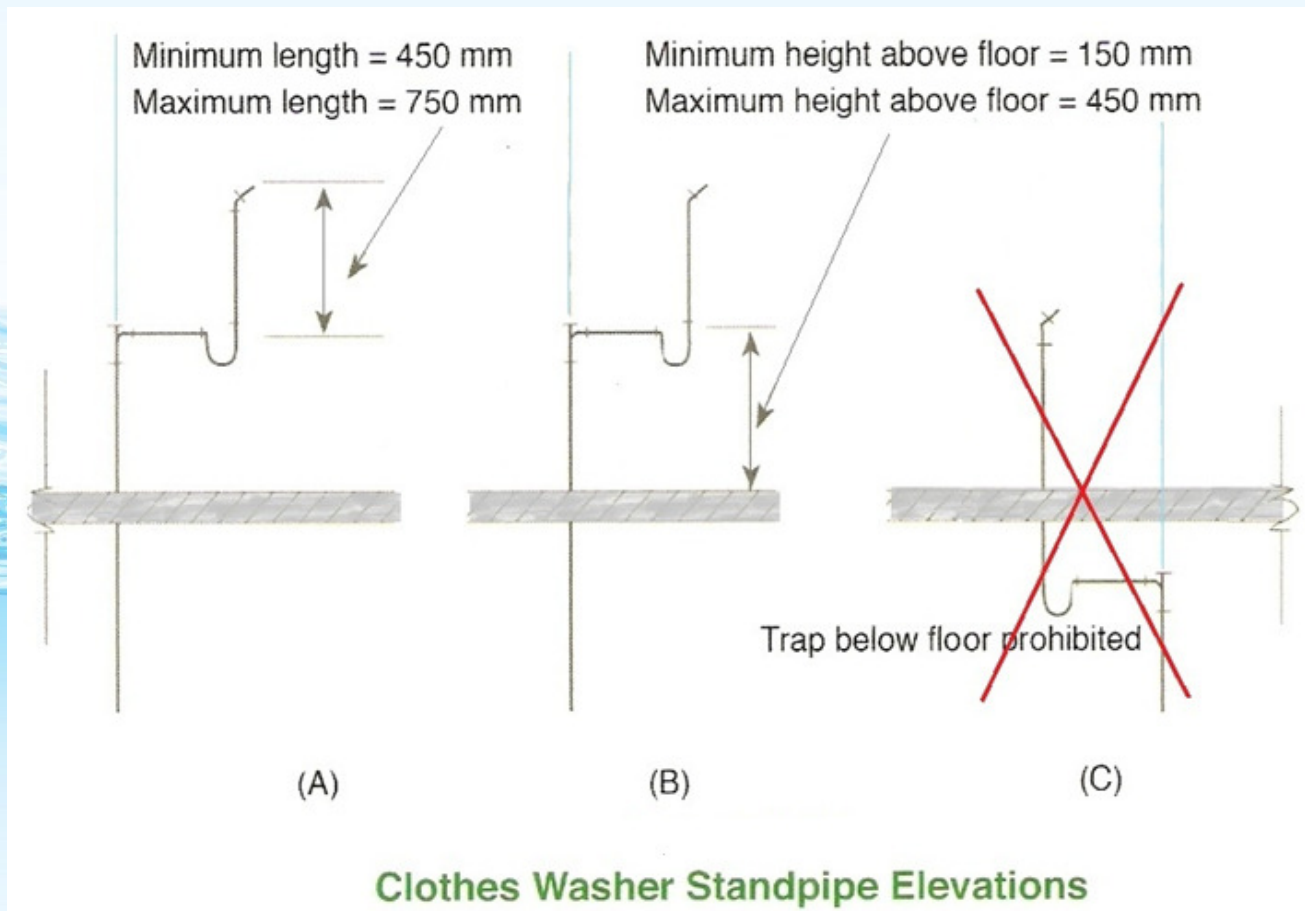


Clothes Washer Standpipe:



- Shall not extend more than 750 mm nor less than 450 mm above its trap
- Trap shall not be installed below the floor
- Trap roughed-in not less than 150 mm nor more than 450 mm above the floor.

Clothes Washer Standpipe Elevations



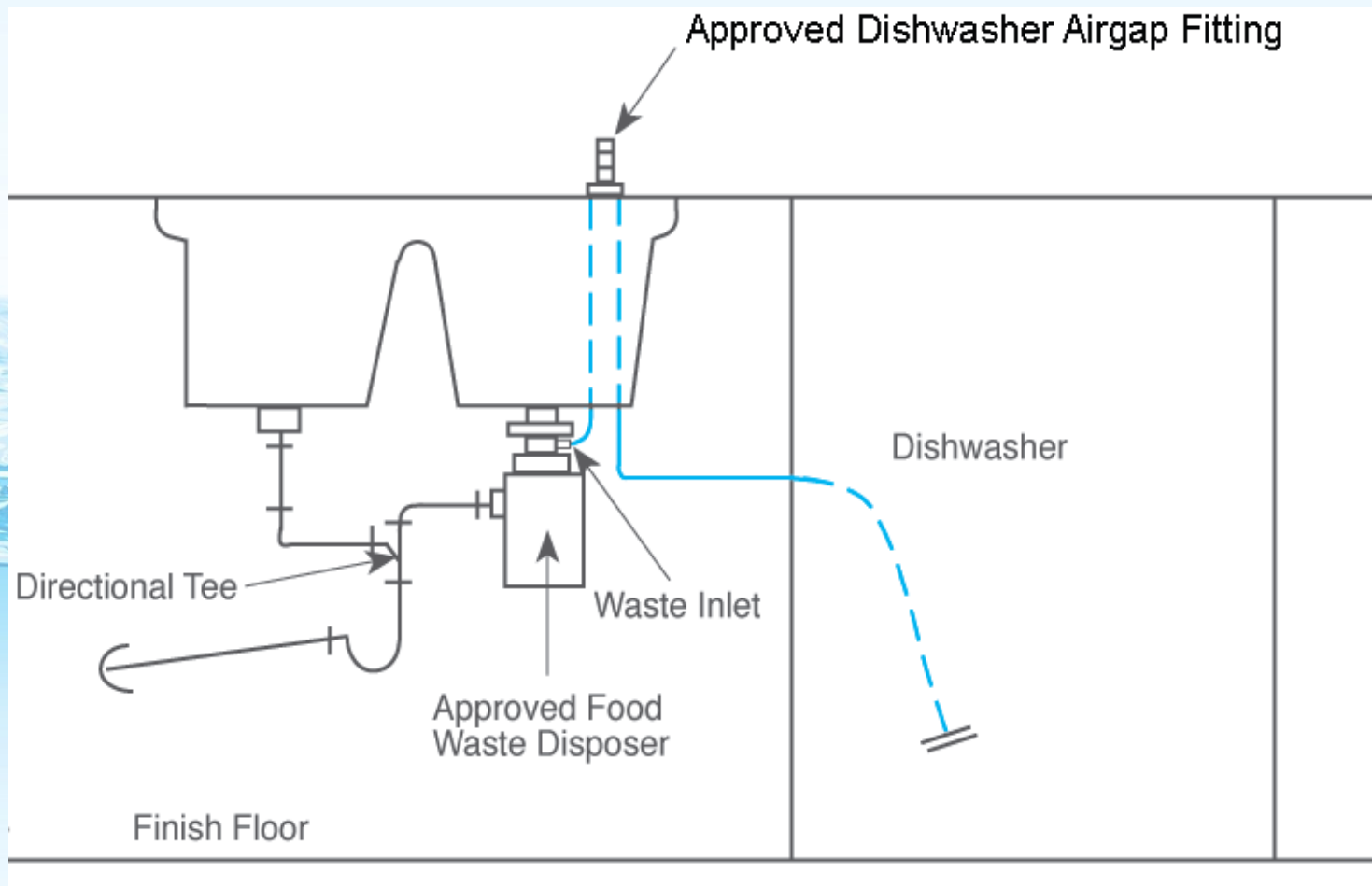




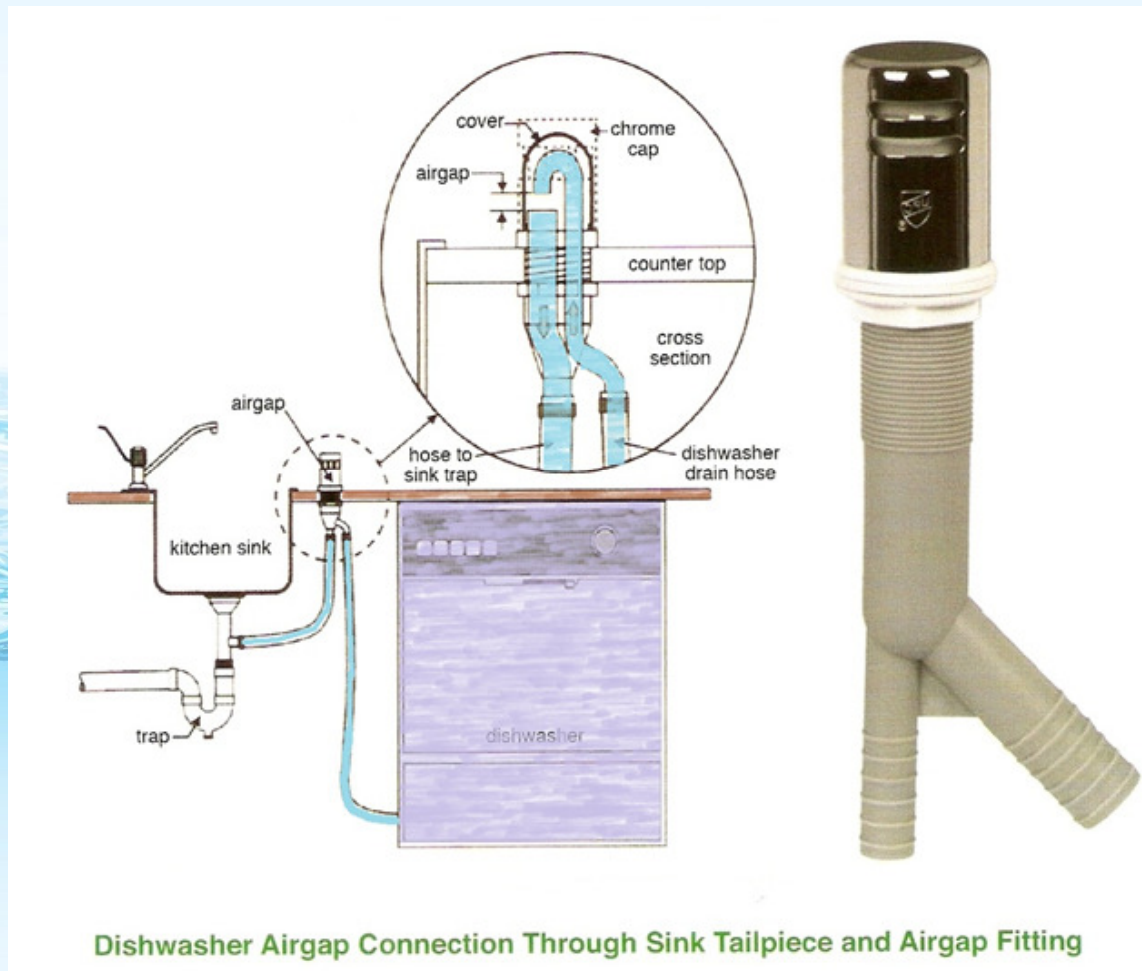
Domestic Dishwasher

- No domestic dishwashing machine shall be directly connected to the drainage system or food waste disposal without an airgap fitting.
- Airgap shall be installed at or above the flood level of the sink or drain-board, whichever is higher.

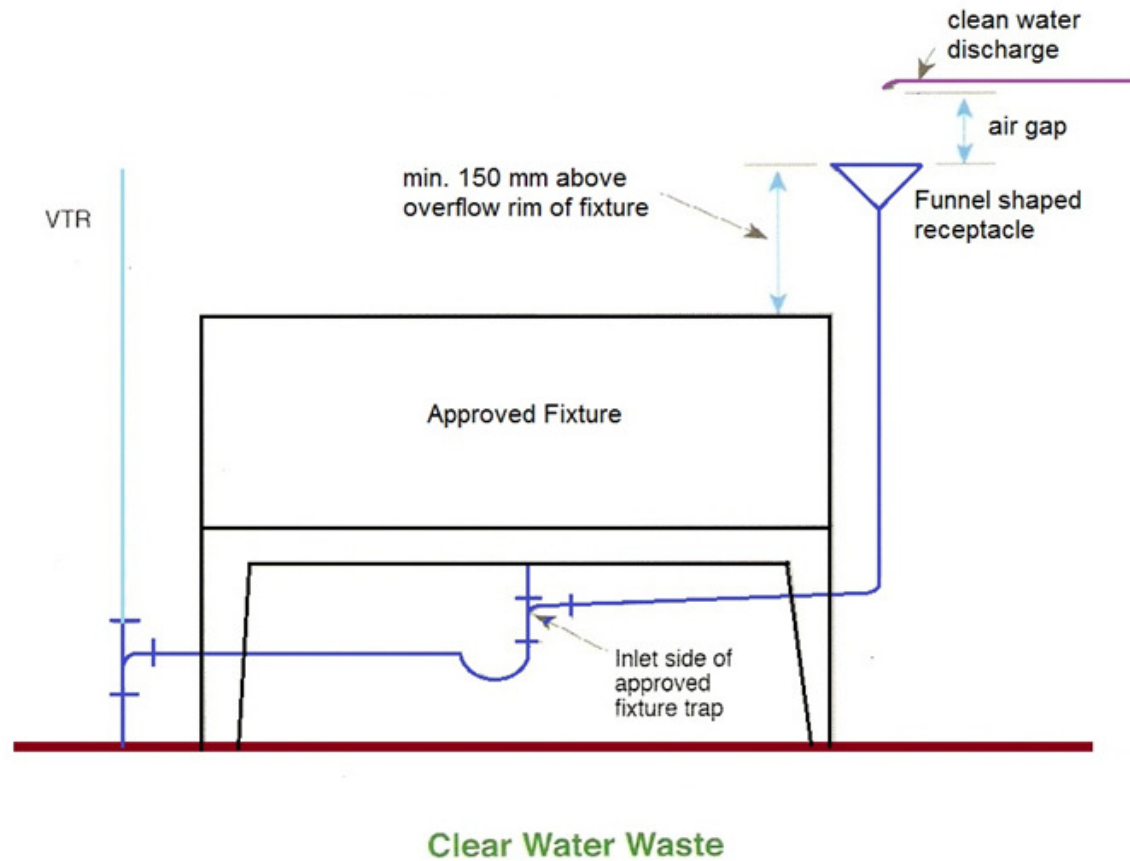
Domestic Dishwasher



Domestic Dishwasher



Cooling Water



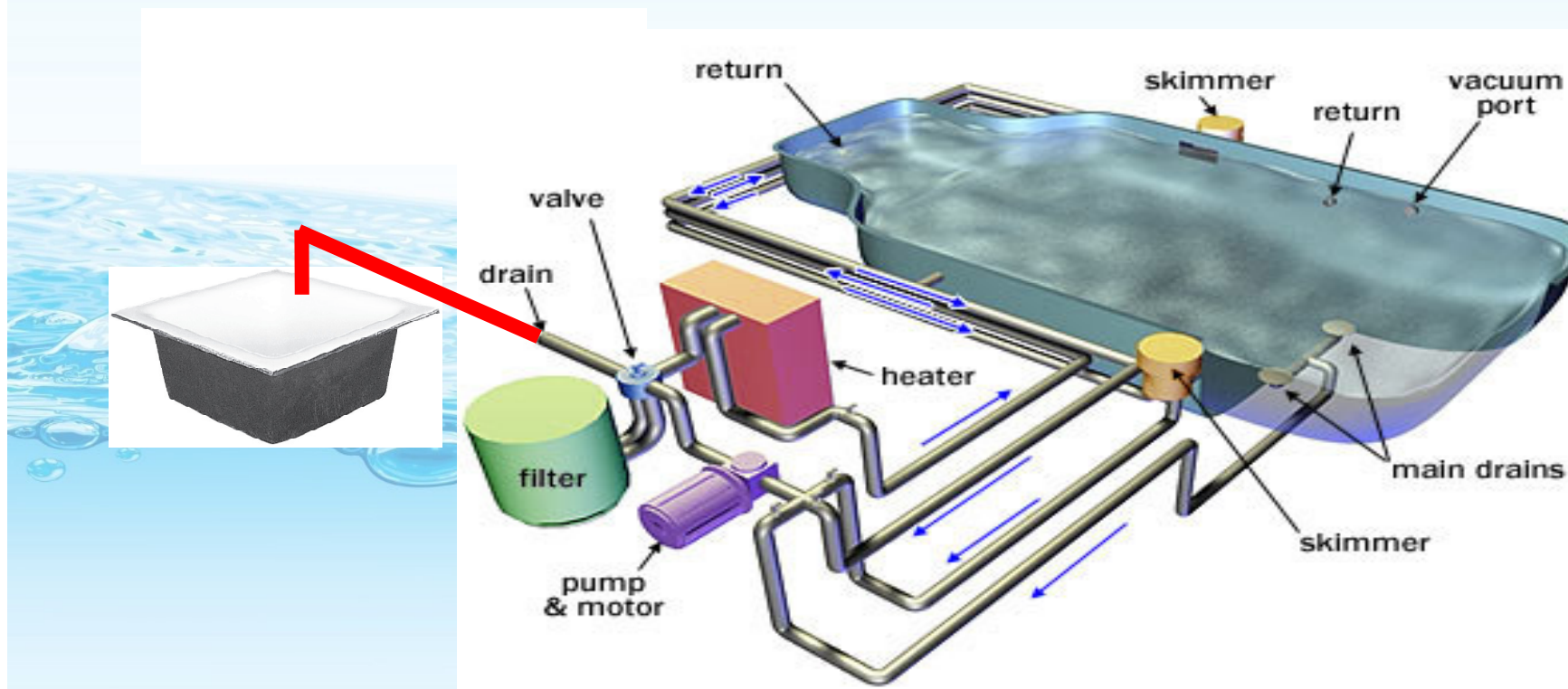
Drinking Fountains

- Shall be installed with indirect wastes.
- A drinking fountain (non-storage type) is the only plumbing fixture that may be installed using either a direct or indirect connection chosen at the discretion of the installer.



Swimming Pool

- Shall be installed with indirect waste



Condensate Wastes and Control

- Air-conditioning condensate waste pipes shall connect indirectly to the drainage system through an airgap or airbreak
- Waste pipes shall have a slope of 1:100
- Condensate or waste water shall not drain over a public way.

Thank you

Any Questions?

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