

City of Mesa Interceptor Sizing Formula

The method for determining the size of traps or interceptors is drainage fixture unit value. **The minimum size for all interceptors is a capacity of five hundred (500) gallons and the maximum size for all interceptors is a capacity of twenty-five hundred (2500) gallons.**

The appropriate size for interceptors and traps is determined as follows:

1 Gravity Grease Interceptor (GGI) sizing:

The interceptor shall be sized using the drainage fixture-unit value as defined in the following table. Using the drain outlet or trap size, these sizes are converted to discharge rates on the basis that one fixture-unit equals 7.5 gpm.

Fixture Outlets or Trap Size (Inches)	Drainage Fixture-Unit Value	GPM Equivalent
1 1/4	1	7.5
1 1/2	2	15.0
2	3	22.0
2 1/2	4	30.0
3	5	37.5
4	6	45.0
Floor Drains (All Sizes)	2	15.0
Dishwashers	Double Size	

Note: Except for domestic sources, users shall not install or replace equipment designed to convert garbage or solid waste into liquefied waste and introduce such waste into the POTW by means of a garbage grinder/disposal. Disposal of garbage and solid waste shall be disposed of as solid waste.

2 Calculating Interceptor Size. The formula to calculate the size of the interceptor is:

- a. Determine total fixture-unit value by multiplying fixture type count by the drainage value.
- b. Totals all values;
- c. Determine total flow by multiplying total value by flow rate of 3 gpm;
- d. Multiply total flow by 12; and
- e. Round up to the next nearest size interceptor.

3 Hydro-mechanical Grease Interceptor (HGI or Trap) Installation and Sizing. Hydro-mechanical Grease Interceptors (Grease Traps) are allowed only when there are four (4) or fewer than four (4) fixtures used for food preparation. Any facility installing a dishwasher shall install a GGI. For the purpose of sizing a HGI, a fixture means the entire unit, e.g., a three (3) compartment sink is considered on unit.

Discharge rate is used to determine the size of the HGI

Determination of discharge rate when manufacturer rate is not known
 $L \times W \times D \times \text{Compartments} / 231 \times 0.75 / 2$

HGI must be installed as follows:

- a. A flow restriction valve shall be installed upstream of the HGI and vented properly. If the HGI is placed below floor level the flow restriction valve must be installed in a manner which allows for inspection and maintenance.