

CLIENT: MIFAB, Inc.
1321 West 119th Street
Chicago, IL 60643

Test Report No: TJ5282	Date: April 9, 2018
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SAMPLE ID: SUPER-500; SUPER-750; SUPER-1000; SUPER-1300; SUPER-1500

SAMPLING DETAIL: Test samples were submitted to the laboratory directly by the client. No special sampling conditions or sample preparation were observed by QAI.

DATE OF RECEIPT: Samples were received at QAI on December 12, 2017.

TESTING PERIOD: January 29, 2018 – April 5, 2018.

AUTHORIZATION: Signed Work Order (17SP120702) by Jason Gremchuk on December 7, 2017.

TEST PROCEDURE: Test and evaluate the submitted samples to *ASME A112.14.3-2000 (R2014) Grease Interceptors*.

TEST RESULTS: The samples **meet** the criteria of ASME A112.14.3-2000 (R2014). Detailed test results are presented in the subsequent pages of this report.

Prepared By

**Signed for and on behalf of
QAI Laboratories, Inc.**



Jeff Foster
Laboratory Test Technician



Christopher Clark
Plumbing Project Manager

2 General Requirements

2.1 Design

Pass

Requirements: Grease interceptors shall comply with all the applicable requirements of ASME B1.20.1 and ASTM A 888.

2.2 Rating

Requirements: The flow rate and grease retention capacity of each grease interceptor shall be rated consistent with the parameters of this Standard.

2.3 Inlet and Outlet Connections

Pass

Requirements: The inlet and outlet connections of the grease interceptor shall be either female pipe thread or of a plain end diameter to allow hubless coupling connections.

Tapered threads shall comply with ASME B1.20.1. Hubless connections shall comply with the dimensional requirements of ASTM A 888.

3 Testing

3.3 Preliminary Test Procedure

3.3.1 Media Analysis

Before conducting rating tests on any grease interceptor, simple analysis of the test media shall be made to determine that it complies with the following characteristics:

(a) Water: hydrogen ion concentration (pH value from 6.0 to 8.0)

(b) Lard: specific gravity of 0.875 ± 0.005 , at 150°F (66°C).

Results: The water used in the test media has a measured pH value of 6.9, and the Lard used in the test media has a measured specific gravity of 0.0878 at 150°F.

3.3.2 Establishing Sink Compartment Capacity

The size of each test compartment shall be established by means of the movable partitions so that the gross capacity of each compartment in gallons will be equal to 1.2 times the proposed flow rate in gallons per minute (gpm) of the interceptor to be tested. The gross sink capacity mentioned above shall be calculated on the basis of length x width x a depth of 12 in. (0.3 m) above the sink outlet flange.

Results: Each sink compartment has a 120 gallon capacity.

3.3.3 Establishing Volume of Incremental Discharge

The volume of water to be discharged from each sink compartment during each test increment shall be based on 10 in. (0.25 m) of water above the sink outlet flange. On this basis, the incremental discharge in gallons per compartment shall be equal to the proposed gallons per minute (gpm) flow rate of the interceptor being tested.

Results: The discharge of the sink compartments is equal too 100 GPM.

3.3.4 Computation of Flow Rate

The flow rate from the sink shall be computed by timing the rate of drainage of the first 9 1/2 in. (0.24 m) of water from the sink compartment, measured from the 10-in. (0.25 m) mark to the datum line 1/2 in. (13 mm) above the sink outlet flange.

3.4 Skimming Procedure

3.5 Rating Test Procedure

After all preliminary data and tests have been established as previously outlined, the rating tests shall be conducted as follows and all test data shall be recorded.

3.5.1 Test Media

Certification tests shall be conducted with fresh, unused lard and water as defined in para. 3.3.1, both within a temperature range of from 150°F to 160°F (66°C to 71°C).

Results: The measured temperature of the water and test media at the time of conducting the test was 156°F.

3.5.2 Ratio of Lard to Water

Both compartments of the sink(s) shall be supplied with the required volume of water (paras. 3.3.2 and 3.3.3) at the temperature stipulated in para. 3.5.1. The test lard shall be introduced into one compartment, during each incremental discharge, in the ratio of 1 lb (0.45 kg) of lard for each 5 gal (19 L) of water in that compartment. Consequently, the proportion of lard to the total amount of water discharge from both sink compartments during each increment shall be 1 lb (0.45 kg) for each 10 gal (38 L), respectively. The required amount of test lard, within the above temperature range, shall be weighed out and poured into the test compartment of the sink.

3.5.3 Test Increments

Each test increment shall consist of the simultaneous discharge of the water from both sink compartments and the lard from the test compartment.

During the first test increment, the lard shall be poured into compartment No. 1 (that compartment having its discharge outlet closest to the interceptor, measured along the waste pipe) and compartment No. 2 shall discharge clear water. During the second test increment the lard shall be poured into compartment No. 2 while the water in compartment No. 1 remains clear. This procedure of introducing the lard into alternate sink compartments shall be continued throughout the test.

3.5.4 Flow Rates

The drainage period for each increment shall be gauged and timed on the basis of the flow from the compartment containing the clear water. The flow rate from the sink shall be computed and recorded for each increment.

3.5.5 Efficiency Determinations

The grease shall be removed from the skimming tank and the efficiency of the interceptor shall be computed at intervals of five increments or less until the average efficiency reaches 93% or less and/or the incremental efficiency reaches 85% or less. After this point has been reached, efficiency checks shall be made after each incremental discharge.

Requirements: The interceptor shall conform with or exceed the following requirements at the breakdown point:

- (a) have an average efficiency of 90% or more
- (b) have an incremental efficiency of 80% or more

(c) have retained not less than 2 lb (0.9 kg) of grease for each 1 gpm (0.6 L/s) average flow rate as determined during the test.
Standard rating flow rate and grease retention capacities for grease interceptors tested in accordance with the above procedure shall conform with Table 1.

Results:

Sample	Flow Rate	Average Efficiency	Rated Capacity
SUPER-500	100 gpm	94.30%	211 lb
SUPER-750	100 gpm	94.56%	223 lb
SUPER-1000	100 gpm	95.12%	245 lb
SUPER-1300	100 gpm	93.87%	261 lb
SUPER-1500	100 gpm	95.61%	278 lb

4 Labeling, Installation, and Maintenance

4.1 Labeling

Pass

Requirements: Products shall be labeled with the following information:

- (a) manufacturer's name or trademark or other recognized identification
- (b) model number
- (c) rated flow(s)
- (d) "Inlet" and "Outlet"
- (e) ASME A112.14.3
- (f) product type by rating
- (g) efficiency at the rated capacity

4.2 Installation Instructions

Pass

Requirements: Grease interceptors shall be provided with complete installation instructions, including but not limited to the following: flow control and/or vent requirements; separate trapping requirements; elevation and accessibility requirements; safety and health-related instructions; cleanout locations; instructions that show the clearances required for maintenance, cleaning, and hazard prevention; cautions against installation in any manner except as tested and rated.

4.3 Maintenance Instructions

Pass

Requirements: Units shall be provided with complete maintenance instructions including but not limited to the following: maintenance instructions; safety and health provisions.

*** END OF TEST REPORT ***