Flame Gard®
Ultimate Protection Against Grease

PDI
-ATLANTA-

TYPE I
PTFE-Coated Baffle & Spark Arrestor

c UL us
LISTED
File No. R10173
NFPA #96

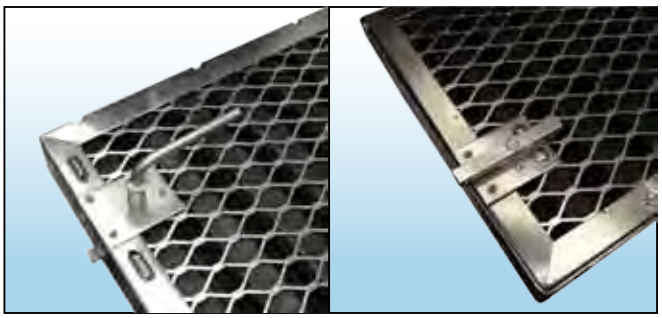
TWO MODELS AVAILABLE....
1. Standard Fixed Baffles
2. Spark Arrestor Screen

94% EFFICIENT AT GREASE EXTRACTION
As tested by Underwriters Laboratories of Canada it has been proven that Flame Gard 1 grease filters have the highest rate of grease extraction of any filter on the market today while still maintaining extremely low static pressures. Quoting U.L.C. File #CR1157 it was stated that the quantity of grease passing through the filter to the exhaust duct did not exceed 6% of the amount generated. (Please refer to the U.L.C. Report contained in the technical section of our full line catalog.)

SIMPLE BUT EFFECTIVE BAFFLE DESIGN
Flame Gard's "U" shaped baffles were arrived at after extensive testing. The smooth, deep baffles cause the grease to drain off the filter quickly, and they resist flame penetration without disturbing the movement of air. Flame Gards have more baffles per inch of filter which is a key factor in our high rate of grease extraction and out low static pressure. More baffles mean more grease impingement area and more paths for the air to flow smoothly and quickly through filter. These combined features make Flame Gard I's the most energy efficient filters available.

PTFE COATED BAFFLES
Flame Gard's high rate of grease extraction is aided by a PTFE coated baffle. In the same manner that grease rolls off a PTFE coated pan, it rolls down our baffles, out of the filter and into the hood's remote collection cup. Because Flame Gard's filters retain only insignificant amounts of surface grease and do not load, you will have constancy of air flow throughout your operating day. In addition, Flame Gard's filters can be easily cleaned in a pot sink or dishwasher with simple detergent and hot water.

MARYLAND LOCKING HANDLES AVAILABLE



TESTING METHOD
Two sample steel filters were weighed and then mounted side by side in the hood. The damper was adjusted to provide a stack velocity of approximately 1800 f.p.m. The distance from the broiler surface to the bottom of the unit was approximately 36 in. The grease generator was weighed, partially filled with cooking oil, reweighed and the weighed recorded.

The grease generatory was placed on the electric broiler and heated until the temperature of the cooking oil was 400˚ F. The sizing of the spray nozzle was such that grease was discharged at approximately one pound per hour per foot width of the test hood.

The test continued for 2 hours...

At the end of the test, the grease laden filters were weighed. The grease collected from the filter run off was collected and weighed. The grease generator was weighed again to determine the weight of grease used.

CLASSIFIED BAFFLE GREASE FILTER MEETS NFPA 96 REQUIREMENT FOR COOKING WITH SOLID FUEL

SPARK ARRESTOR SCREEN
THE 3/8" X 1/2" (9.5mm x 13mm) SPARK ARRESTOR SCREEN MEETS NFPA 211 REQUIREMENT FOR SOLID FUEL BURNING APPLIANCES

- **ALL STEEL CONSTRUCTION**
- **ALL SIZES AVAILABLE**
- **NON-LOADING PTFE COATED BAFFLES**
- **LOW STATIC PRESSURE**

NATIONAL FIRE PROTECTION ASSOCIATION NFPA 96, CHAPTER 11-5.1 STATES

If airborne sparks and embers can be generated by the solid fuel cooking operation, spark arrestor devices shall be used prior to the grease removal device to minimize the entrance of these sparks and embers into the grease removal device and into the hood and duct system.

NFPA 211 CHAPTER 1.11.2 (B) STATES:
(b) The arrestor screen shall have heat and corrosion resistance equivalent to 19 gauge (0.011 in.) galvanized steel or 24 gauge (0.024 in.) stainless steel.
(c) Opening shall not permit the passage of spheres having a diameter larger than 1/2 in. (12.7mm) nor block the passage of spheres having a diameter of less than 3/8 in. (9.5mm).

94% EFFICIENT AT GREASE EXTRACTION!
"The quantity of grease passing through the filter to the exhaust duct did not exceed 6% of the amount generated!"

RESULTS
THE FOLLOWING DATA WAS RECORDED ON THE UNITS TESTED. 20 IN. BY 20 IN. STEEL PTFE COATED FILTERS

WEIGHT OF GREASE GENERATED

Before Test	95 lb
After Test	87.5 lb
Cooking Oil Used	7.5 lb

	Weight Before Test	Weight After Test	Weight of Grease On Filter
Filter #1	15 lb 6 oz	15 lb 6 oz	0 oz
Filter #2	15 lb 5 oz	15 lb 5 oz	0 oz

Weight of oil collected from the grease filter run off 7 lb 4 oz. Amount of oil not retained or collected 1 oz. The quantity of grease passing through the filter to the exhaust duct did not exceed 6 percent of the amount generated.

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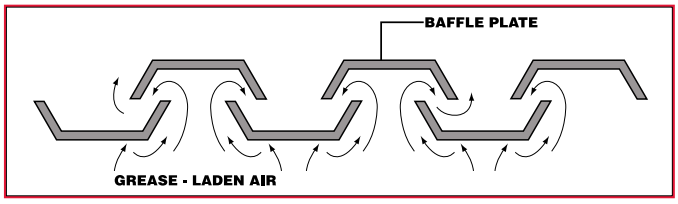
TYPE I

HOW FLAME GARD® WORKS



The affluent from cooking processes contains aerosols of water vapor mixed with evaporated fat or oil. These are carried from the cooking surface by the moving air being drawn into the exhaust hood.

Although small, each aerosol is much heavier than the air molecules surrounding it.

Thus, when the air stream containing these aerosols strikes the Flame Gard® Baffle System, the inertial force of the moisture-grease aerosol is considerably greater than that of the air molecule. While the air molecule changes direction easily, the aerosol strikes the baffle with considerable force, causing it to "splatter" on the surface. Because the surface is coated with PTFE, the grease slides down to the trough and then to the collecting container.

Whereas the heaviest aerosols, because of their greater inertial force, impinge on the surfaces of the baffles facing and perpendicular to the air flow, the lighter ones remain in the air stream. As the air stream is drawn through the baffle system, the restrictions in area created by the baffles cause the air to increase in velocity while changing direction by 180-degrees. Since the inertial force is a product of the mass and the square of the velocity, this increase in velocity serves to increase the inertial force of the remaining smaller aerosols, causing them to impinge on the inner surfaces of the baffles in the same manner in which the heavier aerosols impinged on the entering surfaces. The design of the baffle system provides several impingement surfaces and two rapid 180-degree direction changes.

Because Flame Gard® removes grease aerosols from the air stream and drain them away instead of retaining them. There is no build-up of grease in the path of the air Flame Gard® therefore, insures a constancy of air never before achievable with mesh-type filters.

TABLE 1 HEIGHT OF GREASE FILTERS

Type of Cooking Equipment	Height Above Cooking Surface (ft.)
Without Exposed Flame	0.5
Exposed Flame	2.0
Charcoal Burning	2.0

A complete list of governmental and industry approvals is available on request. See National Evaluation Service report No. NER-255 for allowable values and or conditions of use concerning material presented in this document. It is subject to re-examination, revisions, and possible cancellation. NER-255, "Condition of Use" - filters to be used in a kitchen exhaust system that is protected with an automatic fire suppression system.

UNDERWRITERS' LABORATORIES, INC., Flame Gard® Grease Filters are classified by Underwriters' Laboratories, Inc., as to flammability after exposure to grease-laden air only. Guide AKUS, File #R10173 see Underwriters' Laboratories Classified Building Materials Index.

Accepted for use, CITY OF NEW YORK DEPARTMENT OF BUILDINGS NO. MEA481-7.1-SM.

Meets the requirements of NATIONAL FIRE PROTECTION ASSOCIATION, Standard No. 96.

SELECTION CHART

ENGINEERING DATA
CFM - STATIC PRESSURE
STATIC PRESSURE - INCHES OF H20
CFM PER FILTER - (75 AIR)

CFM PER FILTER - (75 AIR)	Size	10 x 16	10 x 20	12 x 20	16 x 20	16 x 25	20 x 20	20 x 25
	350	.350	.185	.160	.075	.045	.030	.030
	400	.495	.240	.205	.095	.055	.055	.040
	450	.695	.310	.260	.120	.065	.065	.045
	500		.390	.325	.145	.080	.080	.055
	550		.485	.395	.175	.100	.100	.065
	600		.595	.475	.215	.120	.120	.080
	650		.720	.570	.255	.150	.150	.090
	700			.670	.300	.180	.180	.105
	750				.305	.210	.210	.120
	800				.400	.250	.230	.140
	850				.460	.290	.290	.165
	900				.530	.330	.330	.185
	950				.600	.380	.380	.210
	1000				.670	.430	.430	.240
	1050					.480	.480	.275
	1100					.540	.540	.320
	1150					.610	.610	.365

*Measured 6" (152mm) behind Flame Gard Static pressure per filter, as included in this chart, represents the total static pressure for the system regardless of the number of filters used in the hood.

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STANDARD	WITH SPARK ARRESTOR	NOMINAL SIZE	ACTUAL DIM.'S	WT. PER FILTER		CASE
MODEL NO.	MODEL NO.	H &W inches & mm	H X W X D inches	LBS	KG	QTY
101016	73-1016	10 x 16 (254mm x 406mm)	9-1/2 x 15-1/2 x 1-3/4	7.4	3.36	6
101020	73-1020	10 x 20 (254mm x 508mm)	9-1/2 x 19-1/2 x 1-3/4	9.1	4.13	6
101216	73-1216	12 x 16 (305mm x 406mm)	11-1/2 x 15-1/2 x 1-3/4	8.4	3.81	6
101218	73-1218	12 x 18 (305mm x 457mm)	11-1/2 x 17-1/2 x 1-3/4	9.3	4.22	6
101220	73-1220	12 x 20 (305mm x 508mm)	11-1/2 x 19-1/2 x 1-3/4	10.1	4.58	6
101224	73-1224	12 x 24 (305mm x 610mm)	11-1/2 x 23-1/2 x 1-3/4	12.75	5.78	3
101616	73-1616	16 x 16 (406mm x 406mm)	15-1/2 x 15-1/2 x 1-3/4	10	4.54	3
101620	73-1620	16 x 20 (406mm x 508mm)	15-1/2 x 19-1/2 x 1-3/4	12.65	5.74	3
101625	73-1625	16 x 25 (406mm x 635mm)	15-1/2 x 24-1/2 x 1-3/4	16	7.26	3
102010	73-2010	20 x 10 (508mm x 254mm)	19-1/2 x 9-1/2 x 1-3/4	9.4	4.26	6
102016	73-2016	20 x 16 (508mm x 406mm)	19-1/2 x 15-1/2 x 1-3/4	12.65	5.74	3
102020	73-2020	20 x 20 (508mm x 508mm)	19-1/2 x 19-1/2 x 1-3/4	15	6.8	3
102025	73-2025	20 x 25 (508mm x 635mm)	19-1/2 x 24-1/2 x 1-3/4	17.9	8.12	3
102516	73-2516	25 x 16 (635mm x 406mm)	24-1/2 x 15-1/2 x 1-3/4	14.55	6.6	3
102520	73-2520	25 x 20 (635mm x 508mm)	24-1/2 x 19-1/2 x 1-3/4	18.2	8.26	3

TYPE 1 WITH SPARK ARRESTOR AVAILABLE. MEETS CRITERIA SET BY NFPA #96 FOR COOKING WITH SOLID FUEL

ALL FILTERS ARE AVAILABLE WITH SPECIAL FILTER LOCKING HANDLES.
WHEN ORDERING FILTER LOCKING HANDLES, **ADD SUFFIX–MH** TO MODEL NUMBER.

FILTERS AVAILABLE WITH HOOK FOR USE IN CAPTIVE-AIRE STYLE HOODS. TO ORDER...**ADD SUFFIX (-H)** TO THE MODEL NUMBER.

TYPE I - McDONALDS

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	NOMINAL SIZE	ACTUAL DIM.'S	WT. PER FILTER		CASE
MODEL NO.	H X W inches & mm	H X W X D inches	LBS	KG	QTY
MCD 116	10 x 16 (254mm x 406mm)	9-1/2 x 15-1/2 x 1-3/4	7.4	3.36	6
MCD 116-1.5	10 x 16 (254mm x 406mm)	9-1/2 x 15-1/2 x 1-1/2	7.2	3.27	6
MCD 120	10 x 20 (254mm x 508mm)	9-1/2 x 19-1/2 x 1-3/4	9.1	4.13	6
MCD 120-1.5	10 x 20 (254mm x 508mm)	9-1/2 x 19-1/2 x 1-1/2	8.9	4.04	6
MCD 123	12 x 24 (305mm x 607mm)	11-1/2 x 23-1/2 x 1-3/4	13	5.9	3
MCD 126	12 x 16 (305mm x 406mm)	11-1/2 x 15-1/2 x 1-3/4	8.4	3.81	6
MCD 128	12 x 18 (305mm x 457mm)	11-1/2 x 17-1/2 x 1-3/4	9.3	4.22	6
MCD 133	13-1/2 x 23-13/16 (343mm x 605mm)	13 x 23-1/2 x 1-3/4	13	5.9	3
MCD 136	13-1/2 x 16 (343mm x 406mm)	13 x 15-1/2 x 1-3/4	10	4.54	3
MCD 139	13-1/2 x 19-1/2 (343mm x 495mm)	13 x 19 x 1-3/4	12	5.44	3