

ICC-ES PMG Listing**PMG-1004****Reissued Date: August 1, 2009***This listing is subject to re-examination in one year.***www.icc-es.org/pmg | (800) 423-6587 | (562) 699-0543***A Subsidiary of the International Code Council®*

CSI: DIVISION: 11—EQUIPMENT
Section: 11425—Hood and Ventilation Equipment

Product: Giles Recirculating (Ventless) Hoods

Listee: Giles Enterprises, Inc.
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Compliance with the following codes:

2000 *International Mechanical Code*® (2000 IMC)
2003 *International Mechanical Code*® (2003 IMC)
2006 *International Mechanical Code*® (2006 IMC)
2009 *International Mechanical Code*® (IMC)
2009 *International Fire Code*® (IFC)
2006 IAPMO *Uniform Mechanical Code* (2006 IAPMO UMC)
2009 IAPMO *Uniform Mechanical Code* (IAPMO UMC)
2007 *California Mechanical Code* (CMC)

Compliance with the following standards:

NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
UL 710B, Standard for Recirculating Systems
UL 710, Standard for Safety Exhaust Hoods for commercial Cooking Equipment
UL 1046, Standard for Safety Grease Filters for Exhaust Ducts
UL 867, Standard for Safety Electrostatic Air Cleaners

Identification:

Each unit must be identified with a label bearing the Giles Enterprises name and address, model number, serial number, the ICC-ES PMG listing mark, and the name or logo of the third-party inspection agency [Underwriters Laboratories, Inc. (AA-668)]. The ICC-ES PMG listing number (PMG-1004) is optional.

Installation:

Giles Recirculating (Ventless) Type I hoods are used with electrical powered commercial cooking equipment for the collection of smoke and grease-laden vapors. Filtered air is recirculated into the room after passing through a filtering system consisting of a baffle filter, an electrostatic precipitator, a

charcoal filter and pre-filter. Pre-filters are only on the FSH-3.5 through FSH-6 models. Exhaust to the outdoors is not required for these units.

Spaces in which such systems are located must be considered to be kitchens and must be ventilated in accordance with IMC Table 403.3 or IAPMO UMC Table 4-1. For the purpose of determining the floor area required to be ventilated, each individual appliance must be considered as occupying not less than 100 square feet (9.3 m²). See Table 1 for dimensions and specific cooking equipment limitations for each hood model.

Giles ventless hoods must be installed in accordance with the Giles published installation instructions and the applicable code. The instructions within this listing govern if there are any conflicts between it and the manufacturer's published installation instructions.

Automatic Fire Suppression Systems:

Approved automatic fire suppression systems are used on all Type I hoods covered by this listing in accordance with IMC Section 509 or IAPMO UMC Section 513, as applicable.

Models FSH-3.5 through FSH-6; Models EH-5 and EH-6: These models are pre-piped for on-site installation of an Ansul R102, Piranha or equivalent fire suppression system with a minimum 3-gallon (11.4 L) tank. Fire suppression nozzles located in the hood filter and plenum areas are installed at the factory. Nozzles below the hood serving the appliance are selected based on equipment served for each particular installation, and thus are not included in Table 3. Installation must be performed by an authorized Ansul or licensed and qualified fire suppression agent/distributor in accordance with the system listing.

All Other Type I Models: All other Type I hood models are shipped pre-piped with fire suppression nozzles installed in the following locations:

1. Above the cooking surface and pointed down to the cooking surface.
2. In the plenum behind the baffle filters.
3. Between the charcoal filter and the exhaust fan.

See Table 3 for fire suppression equipment details. Final installation must be performed by an authorized Ansul or licensed and qualified fire suppression agent/distributor in accordance with the system listing.

Activation of Fire Suppression System on All Type I Hoods:

1. Models FSH-3.5 through FSH-6: System is activated by any of the four fusible links located on the hood. The fusible links are located behind each baffle filter (two each) and before each exhaust blower (two each).
2. All other Type I models: System is activated by either of two fusible links placed after the charcoal filter and over the cooking surface.

Manual Activation of Fire Suppression System: The fire suppression system on Models GEF, CF (MGF) and WOG can be manually activated at the front of the unit, or by a remote pull where required.

Fire Damper: A listed fire damper, activated by a 285°F (140°C) fusible link, is positioned at the exhaust outlet. The following interlocks are provided:

1. Extinguisher interlock switch: Disconnects power either to appliance served on FSH and EH models or the element relay (all other Type I hood models), if the fire suppression system discharges or becomes inactive. The blower remains operational during this activation.
2. Alarm tie-in switch: If required by the applicable code, allows tie-in of the hood to the fire alarm and detection system.

Portable fire extinguishers are not supplied by Giles, but are required to be installed in kitchen cooking areas in accordance with NFPA 10, Standard for Portable Fire Extinguishers, Table 3-3.1 for Extra (high) Hazard. A fire extinguisher with a basic minimum extinguisher rating of 40-B must be installed so that there is a maximum travel distance to the extinguisher of 30 feet (9.15 m). Additionally, an extinguisher with a basic minimum extinguisher rating of 80-B must be installed so that there is a maximum travel distance of 50 feet (15.25 m).

Clearances to Combustible Materials:

Models FSH-3.5 through FSH-6, EH-5, and EH-6 require a minimum clearance to combustibles of 24 inches (610 mm) on the sides and 10 inches (254 mm) on the top. FSH-3.5 through FSH-6 models must have a clearance from the hood exhaust to the ceiling of 14 inches (457 mm). Equipment used with these hoods must be held in place using an approved restraining device. Fryer vats are centered beneath the fire suppression nozzle with a minimum clearance of 15¹/₂ inches (394 mm) from the front and 8¹/₄ inches (210 mm) from the sides of the hood to the fry vat, and a clearance of 42 inches (1067 mm) maximum from the fryer cooking surface to the front lower edge of the hood. Electric ovens are centered beneath the hood with a minimum horizontal clearance of 0 inches (0 mm) from the front to the edge of the oven, 0 inches (0 mm) horizontally from the sides of the hood to the oven and a clearance of 42 inches (1067 mm) maximum vertical clearance from the top of the oven to the front lower edge of the hood. Griddle and range applications are centered beneath the fire-suppression nozzles with a minimum clearance of 15 inches (381 mm) from the front to the edge of the heat source on the griddle or range, 6 inches (152 mm) from the sides of the hood to the heat source on the griddle or range, and a clearance of 42 inches (1067 mm) maximum from the heat source on the griddle or range surface to the front lower edge of the hood. (There is a maximum of eight burners for the range application.) FSH-3.5 through FSH-6 hoods used with the optional hood stand have 0 inch (0 mm) clearance on each side for the appliance to be used.

Type I hoods using the Piranha fire suppression system may be installed without the equipment centered beneath the nozzles when installed in accordance with the Giles Enterprises published installation instructions and Piranha Restaurant Fire Suppression Systems Data/Specifications.

FSH-2 series, WOG series and GEF series have 0 inch (0 mm) clearance on all sides and top to combustibles. POVH and OVH-10 require a minimum clearance to combustibles of 18 inches (457 mm).

Models: Hoods:**Hood Assembly:**

Giles hoods are fabricated from minimum No. 18 gage [0.048 inch (1.22 mm)] stainless steel. For Type I hoods, all seams and joints subject to grease collection have a liquid-tight, continuous weld, or are sealed at the factory with listed fire caulk. All FSH and EH hoods operate on a 208/240 volt power supply, all integral units operate on a 208-volt or 240-volt power supply. Consult factory for international voltages.

Filters: Baffle and charcoal filters complying with UL Standard 1046 and electrostatic precipitators complying with UL Standard 867 are used in the hoods.

Interlocks: The following is a list of interlocks supplied with Giles recirculating hoods, and their functions (activation of interlocks will result in shutdown either of the appliance served or its heating element):

1. Filter door or access panel switch: ensures the door or access panel which encompasses the air flow section is in place and properly sealed.
2. Filter component placement switch: ensures each filter component is in place: baffle filter switch, charcoal filter switch and the prefilter switch (models FSH-3.5 through FSH-6, EH-5 and EH-6 only).
3. Electrostatic precipitator: ensures the electrostatic precipitator is properly placed and performing.
4. Filter clogged switch: ensures that the air flow does not fall 25 percent below the system's normal operating flow or 10 percent below the lower air flow limit, whichever is lower.

Recirculating (Ventless) Type I Hoods:

FSH-2 series: All Model FSH-2 hoods are Type I recirculating freestanding hoods for use over a single appliance in accordance with Table 1 of this listing.

FSH-3.5 through FSH-6: All Model FSH-3.5 through FSH-6 are Type I recirculating (ventless) hoods for use over fryer vats, ovens, griddles, or ranges.

Models CF-200VH (MGF-20VH), CF-400 VH (MGF-40-VH), CF-500 VH (MGF-50-VH), GEF-400VH, GEF-560VH, GEF-720VH, WOG-MP-VH, and WOG-20MP-VH. These models are Type I recirculating hoods combined with integral deep-fat fryers in accordance with Table 1 of this listing.

Listed Recirculating (Ventless) Hoods:

Giles models OVH-10, PO-VH, and PH-VH are factory-built, recirculating (ventless) hoods used over specific limited appliances in accordance with Table 1 of this listing. Filtered air is recirculated into the room after passing through a filtering system consisting of a baffle filter, an electrostatic precipitator and a charcoal filter. These recirculating (ventless) hoods are not equipped with a grease trough and cup. Table 1 details dimensions and limits for cooking equipment used with each hood model.

Hoods in this category are not factory-provided with an integral fire extinguishing system. In order to be used in Type I applications, a fire suppression system must be installed in accordance with the applicable code. Giles recommended instructions for the addition of these systems are provided in the Operations and Service Manual.

Conventional Type I:

Models EH-5 and EH-6 are conventional Type I hoods which discharge exhaust outdoors through a grease hood duct system conforming to the applicable code. These models comply with UL 710, and are recognized for use over equipment using any fuel source. Except for components required for venting to the outdoors, Model EH-5 is identical to Model FSH-5 and Model EH-6 is identical to Model FSH-6. See Table 2 for limitations of use.

Conditions of Listing:

1. The hoods are fabricated, identified, and installed in accordance with this listing, NFPA 96, and the applicable code.
2. Recirculating hoods are recognized for use with cooking equipment in accordance with Table 1.
3. Each Type I hood must operate with an approved fire suppression system. Where applicable, fire suppression nozzles are field-installed in accordance with Table 3.
4. Clearance must be as noted under the Installation section, above, and Tables 1 and 2. However, these stated clearances may be reduced in accordance with the applicable code. All hoods covered by this listing may be installed with a 0-inch (0 mm) clearance to non-combustible construction.
5. Charcoal filters (and pre-filters for FSH-3.5 through FSH-6 only) must be changed periodically in accordance with the manufacturer's published installation instructions. Baffle filter and electronic air cleaner (EAC) must be cleaned daily. Maintenance must be provided by the owner in accordance with Chapter 13 of NFPA 96 (Re-circulating Systems).
6. The Giles Recirculating (Ventless) Hoods are manufactured by Giles Enterprises, Inc., in Montgomery, Alabama, under a quality control program with annual surveillance inspections by Underwriters Laboratories Inc. (AA-668).

TABLE 1—RECIRCULATING HOODS

HOOD MODEL	HOOD TYPE	UNIT OVERALL DIMENSIONS, W x D x H (inches) ¹	COOKING EQUIPMENT ^{4,5}			
			Equipment Model	Maximum Power (W)	Shortening Capacity (pounds)	Maximum Cooking Area
CF 200 VH (MGF-20-VH) ¹	Type I	18 ¹ / ₈ x 28 ⁷ / ₈ x 81 ¹⁵ / ₁₆	Integral fryer	6200	26	Integral
CF 400 VH (MGF-VH, MGF-40-VH) ¹	Type I	24 ¹ / ₈ x 33 ⁷ / ₁₆ x 84	Integral fryer	10,400	40	Integral
CF 500 VH (MGF-50-VH) ¹	Type I	24 ¹ / ₈ x 34 ⁷ / ₈ x 84	Integral fryer	15,400	45	Integral
FSH-2 Series	Type I	29 ⁵ / ₈ x 31 ¹ / ₂ x 83 ³ / ₄	Fryers ²	20,000	110	380 in ²
		29 ⁵ / ₈ x 31 ¹ / ₂ x 101 ¹¹ / ₁₆				
		29 ¹¹ / ₁₆ X 38 ³ / ₄ X 98 ¹ / ₂				
FSH-2A-99W	Type I	37 ³ / ₁₆ X 38 ³ / ₄ X 98 ¹ / ₂	Oven	8,000	NA	54" high X 30" wide X 25" deep
FSH-3.5	Type I	42 ¹¹ / ₁₆ x 49 ¹¹ / ₁₆ x 72 ¹ / ₈	Fryers ²	20,000 single 40,000 total	160 (total)	576 in ² single fryer 760 in ² any combination
			Ovens	55,000	N/A	42"L x 42"D
			Griddles, ranges ³	25,000	N/A	30"L x 26"D ³
FSH-4	Type I	48 ¹¹ / ₁₆ x 49 ¹¹ / ₁₆ x 72 ¹ / ₈	Fryers ²	20,000 single 40,000 total	160 (total)	576 in ² single fryer 760 in ² any combination
			Ovens	55,000	N/A	48"L x 42"D
			Griddles, ranges ³	25,000	N/A	36"L x 26"D ³
FSH-5	Type I	60 ¹¹ / ₁₆ x 49 ⁵ / ₈ x 72	Fryers ²	20,000 single 40,000 total	160 (total)	380 in ² single fryer 760 in ² any combination
			Ovens	55,000	N/A	60"L x 42"D
			Griddles, ranges ³	25,000	N/A	48"L x 26"D ³
FSH-6	Type I	72 ¹¹ / ₁₆ x 49 ⁵ / ₈ x 72	Fryers ²	20,000 single 40,000 total	160 (total)	380 in ² single fryer 760 in ² any combination
			Ovens	55,000	N/A	72"L x 42"D
			Griddles, ranges ³	25,000	N/A	60"L x 26"D ³
GEF-400VH	Type I	24 x 37 ¹ / ₂ x 84	Integral fryer	10,400	45	Integral
GEF-560VH	Type I	24 x 37 ¹ / ₂ x 84	Integral fryer	15,400	60	Integral
GEF-720VH	Type I	24 x 37 ¹ / ₂ x 84	Integral fryer	20,400	75	Integral
OVH-10	See Note 7	36 x 40 ⁹ / ₁₆ x 21 ⁵ / ₁₆	Ovens	11,500	N/A	43" x 40 ⁹ / ₁₆ "
			Rotisseries	6200	N/A	34" x 25" (nominal)
PO-VH or PH-VH	See Note 7	60 ⁷ / ₁₆ x 41 ⁵ / ₈ x 24 ¹³ / ₁₆	Ovens	50,000	N/A	N/A
			Rotisseries	6200	N/A	N/A
WOG-MPVH ¹	Type I	24 ¹ / ₈ x 33 ⁷ / ₁₆ x 84	Integral fryer	20,400	70	Integral
WOG-20MP-VH ¹	Type I	18 ¹ / ₈ x 29 ⁵ / ₁₆ x 81	Integral fryer	6,200	30	Integral
WOG-VH-D ¹	Type I	24 ³ / ₁₆ x 38 ⁵ / ₈ x 80 ¹ / ₂	Integral fryer	11,900	65	Integral

For **SI**: 1 inch = 25.4 mm, 1 pound = 0.454 kg, 1 cfm = 0.589 m³/s.

¹Overall dimensions include hood and fryer; numbers in parentheses represent previous model numbers.

²Maximums shown apply to any potential fryer.

³Maximum of eight burners.

⁴Minimum clearance from the top of the exhaust outlet to any ceiling for units without the listed diverter stack is 12 inches (305 mm). Models FSH-3.5 through FSH-6 require 14 inches (356 mm) from the top of the exhaust outlet to any ceiling. A maximum clearance of 42 inches (1067 mm) is required, measured from the top of the heater surface of the appliance to the bottom edge of the hood skirt.

⁵Maximum cooking temperature is 400°F (204°C) for all griddles, ranges and fryers, 450°F (232°C) for FSH-2A-99W and 500°F (260°C) for all other ovens. Models OVH-10 and PO-VH do not have a maximum cooking temperature.

⁶ When kW rating of the rotisserie oven exceeds 6.2 kW, the hood is marked with the manufacturer and model of the specific rotisserie oven(s) and noted with door latch time.

⁷ Hoods may be used with or without fire suppression systems in accordance with the Listed Recirculating (Ventless) Hoods section of this listing.

TABLE 2—CONVENTIONAL EXHAUST HOODS, TYPE I

MODEL DESIGNATION	HOOD DIMENSIONS, L x D x H (inches)	CLEARANCES (inches) ¹				AIRFLOW (cfm/foot of hood length) ¹	MAXIMUM APPLIANCE TEMPERATURE (°F)
		Overhang		Vertical			
		Sides	Front	Max.	Min.		
EH-5	60 ¹¹ / ₁₆ x 42 ¹ / ₈ x 81 ¹ / ₁₆	6	12	42	33	775	400
EH-6	72 ¹¹ / ₁₆ x 42 ¹ / ₈ x 81 ¹ / ₁₆	6	12	42	33	846	400

For **SI**: 1 inch = 25.4 mm, 1 cfm/ft = 1.931 m³/s/m, °F = 1.8 °C + 32.

¹Dimensions are distances from hood to cooking surface.

TABLE 3—FIRE SUPPRESSION NOZZLES AND FUSIBLE LINKS¹

UNIT	AREA PROTECTED	ANSUL PART NUMBER	QUANTITY	NOZZLE	FUSIBLE LINK PART NUMBER	FUSIBLE LINK RATING ²
CF 200 VH (MGF-20-VH), CF 400 VH (MGF-VH, MGF-40-VH), CF 500 VH (MGF-50-VH), GEF-400VH, GEF-560VH, GEF-720VH, WOG-20MP-VH	Appliance	419345	2	1/2 N	Globe Tech 317135	135°F (57°C)
	Plenum	419345	2	1/2 N	Ansul 550368	165°F (74°C)
FSH-2	Appliance	419345	2	1/2 N	Ansul 550368	165°F (74°C)
	Appliance	419345	2	1/2 N	Globe Tech 317135	135°F (57°C)
	Plenum	419345	2	1/2 N	Ansul 550368	165°F (74°C)
FSH-2A, FSH-2A-99, FSH-2A-99W	Appliance	419346	2	1 N	Globe Tech 317135	135°F (57°C)
	Plenum	419345	2	1/2 N	Ansul 550368	165°F (74°C)
WOG-MPVH	Appliance	419345	2	1/2 N	Ansul 550368	165°F (74°C)
	Plenum	419345	2	1/2 N	Ansul 550368	165°F (74°C)
WOG-VH-D ¹	Appliance	419346	2	1	Ansul 550368	165°F (74°C)
	Plenum	419345	2	1/2 N	Ansul 550368	165°F (74°C)

¹Hood models EH-5, EH-6, FSH-3.5 through FSH-6 require specific fire suppression design based on appliance types located below the hood.

²See operator’s manual for alternate fusible links based on unit type or distance from appliance to hood.