

GENERAL INFORMATION ON
FISH FRYING RANGE

GAS INFORMATION

Each pan will have a gas usage of 29kw per hour and each burner will be burning at a gas pressure of 16mbar. This appliance will have its own isolation valve, which is easily accessible in an event of an emergency. The combustion chamber consists of fire bricks and heating cones with each pan that has separate exhausts, which run all the way around the bottom of the pan to increase efficiency. The combustion CO-CO2 ratio is 0.006.

EXTRACTION INFORMATION

Extraction Fan Motor

The fan motor assembly will consist of a multi-vane steel fan and a resilient mounted motor. This will be fitted in a central fusel housing unit, which will be attached to the 300mm ducting. The fan motor unit is designed to meet approved noise spectrum analysis as detailed below:

Duty 1700 CFM @ 2" SWG

Overall Sound Pressure Level = 55DBA @ 1 Meter

Fan

The multi-vane fan which will be used for this fish frying range will be balanced by the manufacturer to reduce vibration. It has a taper locked bush to attach it onto the motor. The size of this fan will be 300mm in diameter and 130mm in depth.



Motor

The motor that we will use will be a 0.75HP motor and will be resilient mounted to further reduce noise and vibration. It will be mounted onto the central fusel housing unit in order to allow easy access for servicing and maintenance.



Ducting

The ducting pipe we will be using for this machine will be 300mm in diameter. All joints will be sealed with factory approved tape and high temperature sealant. The ducting can be painted providing it is first primed with an etching primer suitable for galvanised steel. The ducting will be insulated through walls, ceilings and roofs etc. Also, the ducting design will be fitted with a sump box at the lowest point in order to collect fat and grease.

Filtration

The filtration we propose to install is a 3 stage carbon filter.

- Stage 1 - 50mm Thick Glass Fibre Throwaway Pre-Filter
- Stage 2 - Particulate Filter (Bag Type)
- Stage 3 - WF Carbon XX Duty (Activated Carbon Filter)

The sizes and dimensions of the filters and filter casing are shown below:

- 1-NO. 3 Stage Carbon Filter Set 610 x 610 x 1100 Length, complete with Access Panel, Unit Supplied in Galvanised Finish.

Filter unit comprises of:

1. 600 x 600 x 50 Pre Filter
2. 600 x 600 Particulate Filter 300 Long
3. 600 x 600 x 600 Carbon Filter Unit

Please find below a table displaying the details of the carbon filter:

No. of Panels	Carbon Weight	Air Vol CFM	M ³ /s	Air Res WG
12	50	2250	1.06	0.20

If fan produces 2250 CFM this will produce a dwell time of 1 second set against a resistance of 55 Pascal's.

The filters will need to be changed according to how busy the premises will be. This can range from changing them every month to once a year.



Bag Filter F7

Dimensions

Header HxWxD Actual size in mm	No. of Pockets
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592x592x20mm	6
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592x490x20mm	5
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592x287x20mm	3
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Application

For high efficiency filtration in heating, ventilation and air conditioning systems. As prefilters for high efficiency absolute filters. The F7 bag is designed to ensure long life between maintenance intervals and achieve a high level of cleanliness in offices, shopping centres, factories, etc.

Construction

The F7 bag filter features synthetic media, each pocket is constructed from lofted synthetic micro fibre. Integral spacers prevent over inflation of the pockets and provide uniform air distribution throughout the media. The pockets are retained in a rigid galvanised header frame ensuring maximum stability in all applications.

Please note that other sizes are available on request. Please contact the sales office.

Performance

Average efficiency BS EN 779 Rating	Filter Depths	Rated Airflow	Initial Resistance	Final Resistance	Average Arrestance
F7	300mm (12")	0.38m ³ /s	55pa	550p	91%
F7	500mm (20")	0.66m ³ /s	59pa	550p	91%
F7	600mm (24")	0.79m ³ /s	69pa	550pa	91%

The above information is based on a full sized filter 592x592x20mm

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Carbon Media Data Sheet

DESCRIPTION

Grade **FB2-AC100**
Non Woven Polyester impregnated with Activated Carbon

TYPICAL PROPERTIES

Nominal Loft	6mm
Weight	>250g/m²
Carbon Weight	>50g/m²
Carbon %	20
CTC Adsorption	>6Kg/m³
Colour	Black

The data contained in this bulletin is believed to be accurate at time of going to press. Universal Air Products Ltd reserves the right to amend product data without prior notification. Universal Air Products Ltd can assume no liability for results obtained or damages incurred through the application of the data and tests presented.

Standard Duty Grease Filter G1

Designed for general purpose kitchen extract use, the standard grease filter is suitable for removing airborne fats and grease from the atmosphere. Regular maintenance by degreasing the panel ensures optimum performance at all times.

Extra Duty Grease Filter G2

The extra duty grease filter has been designed for use in highly grease-laden conditions where cleanliness of the exhaust air is of prime importance. Regular maintenance by degreasing the panel to ensure optimum performance at all times.



Construction

Grease Filter G1-G2

Both types of filter are produced using the fully enclosed frame method of construction. A knitted and crimped mesh core is sandwiched between two outer facing meshes then enclosed in a "U" channel frame mitred on all corners and securely fastened at one corner. Two fold flat handles are fitted as standard on these filters to enable easy removal. These filters can be made using Galvanised Steel, Stainless Steel or Aluminium.

Initial Resistance At Rated Velocities

Panel Type	Rated Velocity m/s	Nominal Thickness	Initial P/L Pa
Standard Duty G1	2.55	25mm	25
Standard Duty G1	2.55	50mm	30
Extra Duty G1	2.55	25mm	40
Extra Duty G1	2.55	50mm	45

Air Volume Ratings At Rated Velocities (Standard Sizes)

Size			Standard Duty	Extra
H mm	W mm	D mm	Flow (m3/s)	Flow (m3/s)
24	24	47	0.13	0.13
24	49	47	0.28	0.28
39	39	47	0.37	0.37
39	49	47	0.47	0.47
44	44	47	0.47	0.47
59	39	47	0.59	0.59
59	59	47	0.86	0.86