



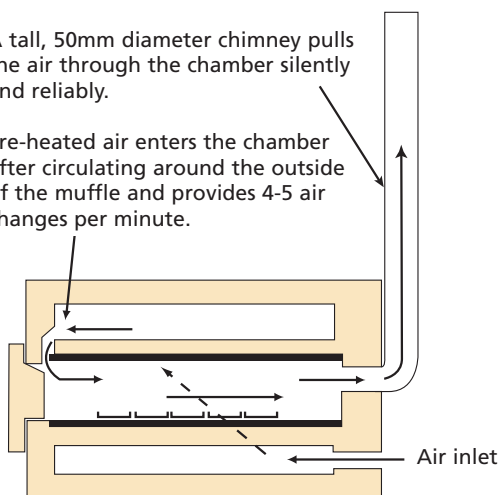
# 1100°C Ashing and Burn-Off Furnaces



AAF 11/7/301

A tall, 50mm diameter chimney pulls the air through the chamber silently and reliably.

Pre-heated air enters the chamber after circulating around the outside of the muffle and provides 4-5 air changes per minute.



AAF 11/7 Air Flow

## General Features

- Seven different ashing and burn-off furnace models to choose from.
- Select the model and design best suited to your need, based on the process and material to be heated.
- Air inlets located in front of chamber and outlet chimney in rear facilitate natural convective air flow.
- Maximum operating temperatures of 1100°C & 1200°C.
- Chamber air flow provides oxygen to enhance ashing or burning process, and removal of exhaust.
- The Model AAF 11/7 furnace design is ideal for the "Standard Test Method for Ash in the Analysis Sample of Coal and Coke from Coal", as described in ASTM Standard D 3174-00.
- Isolation of heating element from working chamber in AAF and GSM furnaces eliminates potential of element contamination by process.
- Reduction of carbon build-up is assured by air flow through the furnace chamber.
- BWF high power graded element winding provides enhanced heat-up and improved chamber uniformity.
- Large diameter extended chimney provides for efficient process exhaust.
- Dense refractory around chamber entrance resists abrasion and wear.
- Models AAF 11/3, AAF 11/7 and GSM 11/8 all incorporate traditional wire-wound muffle design.
- Wire wound muffles heat the chamber from 4 sides, providing good temperature uniformity.
- GSM fused quartz muffle offers superior containment of aggressive atmospheres.
- Unique GSM quartz muffle provides dust free working chamber.
- Model AAF 11/18 isolates heating elements with protective silicon carbide tiles. See drawing on page 15.
- Vertical lift door design keeps hot door insulation away from the operator.
- Positive break door safety switch isolates power to the heating elements when door is opened.
- Choice of Model 301 control or programmers.

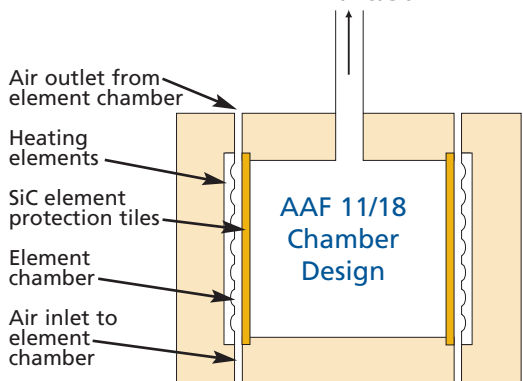
APPLICATIONS	SAMPLE MATERIALS	FURNACE
Ashing for Material Analysis	Natural Materials & Fibers Natural Materials & Fibers, Animal Fats, Man Made & Natural Hydrocarbons Natural Materials & Fibers, Animal Fats, Man Made & Natural Hydrocarbons, H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCL	BWF & AAF AAF GSM
Ashing for Material Analysis in a Dust Free Chamber	Natural Materials & Fibers, Animal Fats, Man Made & Natural Hydrocarbons, H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCL	GSM
Burn-off and Removal of Material for Cleaning*	Natural Materials & Fibers Natural Materials & Fibers, Man Made & Natural Hydrocarbons	BWF & AAF AAF

Examples of Natural Materials & Fibers: Foods, Grains  
Carbolite can supply a special ashing and burn-off furnace with afterburner. Contact Carbolite for further information.

Examples of Hydrocarbon Materials: Plastics, Rubber, Coal  
\*See note page 15



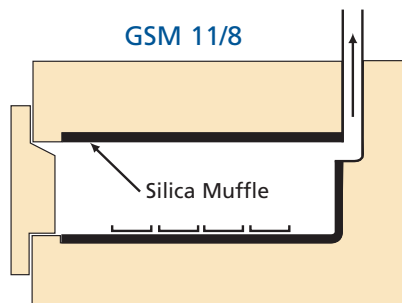
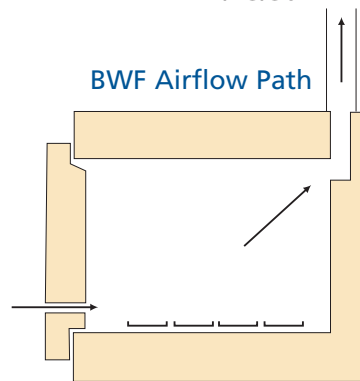
AAF 11/18/301



Trays supplied with AAF furnaces.



BWF 11/13/301



GSM external case design is the same as above photos.

## 1100°C & 1200°C Ashing and Burn-Off Furnaces

Furnace Model	Max. Temp. (°C)	Internal Chamber Dimensions Inches (mm)			External Dimensions Inches (mm)			TC Type	Max. Power (kW)	Furnace Voltage	Shipping Weight (lb.)
		Height	Width	Depth	Height	Width	Depth				
AAF 11/3	1100	3.25 (85)	6.00 (150)	10.00 (250)	22.75 (580)	14.50 (370)	19.00 (485)	K	1.75	120/208/240	53
AAF 11/7	1100	3.50 (90)	6.75 (170)	18.00 (455)	25.50 (650)	17.00 (430)	29.00 (740)	K	3.9	208/240	160
AAF 11/18	1100	9.25 (235)	7.75 (195)	15.75 (400)	27.75 (705)	20.00 (505)	26.50 (675)	K	7.0	208/240	160
AAF 12/18	1200	9.25 (235)	7.75 (195)	15.75 (400)	27.75 (705)	20.00 (505)	26.50 (675)	R	7.0	208/240	160
GSM 11/8	1100	4.75 (120)	7.00 (175)	13.50 (345)	27.75 (705)	20.00 (505)	28.50 (725)	K	3.0	208/240	152
BWF 11/13	1100	8.00 (200)	8.00 (200)	13.00 (325)	25.75 (655)	17.25 (435)	24.00 (610)	K	3.1	208/240	113
BWF 12/18	1200	8.00 (200)	8.00 (200)	13.00 (325)	25.75 (655)	17.25 (435)	24.00 (610)	R	3.1	208/240	113

Furnaces operate on single phase voltage. Specify voltage at time of order. Continuous operating temperature is 100°C below maximum temperature. Note: For burn-off and cleaning processes, see fluidized baths on pages 50 and 51.