KELLER MANUFACTURING

ANIMAL CREMATION CHAMBER
SPECIFICATION Model "KMA 1200-75"

EQUIPMENT:

Keller Manufacturing Inc. - Single Chamber Animal Cremator; Natural Gas, Propane (LP) or Oil fired.

MANUFACTURER:

Keller Manufacturing Inc.

CONSTRUCTION STANDARDS:

The cremator shall be constructed of U.L./CSA listed components and will meet or exceed nationally accepted incinerator construction standards per the Incinerator Institute of America (IIA) publication guidelines; i.e.:

A. Primary chamber will not exceed 60% of total furnace volumes. Flue connection shall not be considered part of furnace volume.
B. Flame supervision through continuous ultraviolet scanning flame detectors on all burners.
C. High temperature refractory construction with air-cooled walls to prevent excessive heat radiation.
D. Exhaust gas temperature reduction.

SAFETY CERTIFICATIONS

Underwriters Laboratories (UL) listed appliance File number MH47704.

CREMATOR DIMENSIONS:

Chamber volumes:	Primary - 28.5 CF	(0.80 CM)
	Secondary - 28.9 CF	(0.82 CM)
Primary Chamber:	61 ¾ "L x 31" W x 25 ½ " H (1568 mm x 7787mm x 648 mm)	
Structural footprint:	120" L x 48" W	(3048 mm x 1219 mm)
Over-all dimensions:	128" L x 48" W (59" W/Touch Screen) x 89"H (3251 mm L x 1219 mm W [1499 mm W/Touch Screen] x 2260 mm H)	

OPERATING TEMPERATURE:

Temperatures are determined as a result of federal, state or local permitting authority operating standards.

Typical primary chamber setting:	1,000ºF-1,200ºF (538 C - 648 C)
Typical secondary chamber setting:	1,400ºF-1,800ºF (760 C - 982 C)

POWER CHARGING DOOR:

Door Height: 30 ½" (778 mm)
Door Width: 35 ¼" (895 mm)

PRIMARY CHAMBER OPENING:

Width: 31" (787 mm)
Height: 23" (584 mm)

RETENTION TIME:

In excess of 1 second.

CAPACITY RATING:

75 lb/hr for type 4 waste. Single load capacity of 300 lbs per cremation cycle

DRAFT:

Induced via refractory lined draft inducer.

SHIPPING WEIGHT:

14,000 lbs. (6350 kg)

EMISSIONS:

The Keller Manufacturing animal cremator shall meet or exceed federal, state/province and local environmental regulations.

EMISSION CONTROL:

Secondary chamber equipped with one, 1,000,000 BTU/HR burner. Also equipped with an electronic exhaust gas scanner system which temporarily suspends operation of the primary chamber burner if the opacity of the exhaust gases reach 20%.

STEEL CONSTRUCTION SPECIFICATIONS:

A. The structure to be heavy 3" steel angle , square tube; 3/8" steel plate, seal welded construction.
B. Subfloor to be 3/16" steel plate, seal welded construction.
C. The exterior shell to be 12 gauge steel removable panels.
D. Interior shell to be 10 gauge steel, seal welded construction.

INSULATION & REFRACTORY SPECIFICATIONS:

A.	Hot Hearth:	3000^{O}F abrasion resistant cast refractory monolithic cast 7" - 13" thick, 1 -1/2" recessed top and rounded, stressed arched bottom.
B.	Chamber Floors:	3000^{O}F abrasion resistant cast refractory, 5" thick on top of 2" 2400^{O}F light weight insulating cast.
C.	Chamber Ceilings:	3000^{O}F cast refractory, monolithic cast, rounded, stressed arched, 5"-9" thick, topped by 2" 2400^{O}F light weight insulating cast.
D.	Interior Walls:	2800^{O}F. cast refractory, 4 1/2" x 9", all chambers are backed by 2" of 1900^{O}F ceramic fiber insulation
E.	Stack:	Lined with 2" of 2200^{O}F insulating refractory.

SKIN TEMPERATURE CONTROL:

Integral dual casing, completely air-cooled design to prevent excessive heat radiation.

COMBUSTION EQUIPMENT:

A. Combustion Air - One (1) single phase, 208-230/460V, 17-15.5/7.6 amp, 5 hp air-blower motor (1200 CFM/34 CMM). Three Phase available.
B. Primary Chamber - One 500,000 BTU/HR nozzle mix, gas-fired burner. Eclipse, North American, or equal.
C. Secondary Chamber - One, 1,000,000 BTU/HR modulating, nozzle mix, gas-fired burner. Eclipse, North American, or equal.
D. Burner Flame Safeguard - Control supervision on each burner via a flame safeguard relay and ultra-violet scanner.
E. Low Air Pressure Safety Switch - Interlocked to all burners.

EXHAUST GAS TEMPERATURE REDUCTION:

Hot air duct operating exit temperature: 900^{O} F (482 C)

HOT AIR DUCT:

10 gauge carbon steel, high temperature 2" refractory lining, pre-drilled flanges, 20" Outside Diameter, 23" at flanges.

UTILITY REQUIREMENTS:

A. GAS:

1. Pressure:
   a) Natural Gas: 12" to 15" W.C. (304mm to 381mm)
   b) Propane: 11" W.C. (288 mm)
2. Flow Rate: 1,500,000 BTU/hr

B. ELECTRICAL:

1. Voltage: 220/440 Volts
2. Phase: Single or 3 Phase
3. Freq.: 50/60 HZ.
4. Amps: **1 Phase** 70amp **/ 3 Phase** 230v/40amps, 440v/20amps.

CREMATION CHAMBER LOADING/CLEAN-OUT DOOR:

Hydraulically operated, refractory lined, upward movement guillotine style door W/Primary Chamber View Port

CREMATION PROCESS CONTROL:

The cremation cycle is controlled by a programmable logic control (PLC) system. A visual confirmation of the system status is provided through control panel indicator lights and digital temperature display. Continuous fuel and air modulation is automatically controlled by a time/temperature actuated system. Operator interface is through two sets of simple push button controls and panel timer.

EXTERIOR FINISH

The cremation chamber is finished with grey or brown hi-resistance powder coating. Back and top of unit is coated with epoxy type black paint. Loading door is trimmed in stainless steel.