KELLER MANUFACTURING

ANIMAL CREMATION CHAMBER
SPECIFICATION Model KMA 1200-125

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 as originally established 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.

CREMATOR DIMENSIONS:

Chamber volumes:	Primary – 52.5 CF (1.49 CM) Secondary - 51 CF (1.44 CM)
Primary Chamber:	75" L x 38" W x 31" H (2388 mm x 965 mm x 788 mm)
Structural footprint:	138 7/8" L x 62" W (3962 mm x 1575mm)
Over-all dimensions:	138 7/8" L x 62" W (73" W/Touch Screen) x 104 ½"H (3251 mm L x 1547 mm W [1854 mm W/Touch Screen]x (2654 mm H)

POWER CHARGING DOOR:

Door Height:	34½" (876 mm)
Door Width:	42" (1066 mm)

PRIMARY CHAMBER OPENING:

Width: 38” (965 mm)
Roof Arch Height: 30” (762 mm) @ High Point – 27” (686 mm) @ Low point

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 (538ºC - 648ºC)
Typical secondary chamber setting: 1,600ºF-1,800ºF (871ºC - 982ºC)

RETENTION TIME:

In excess of 1 second.

CAPACITY:

Single load capacity of 500 lbs (227 kg) per cremation cycle. Burn Rate of 125 lbs/hr.

DRAFT:

Induced via refractory lined draft inducer.

SHIPPING WEIGHT:

22,000 lbs. (9,979 kg)

EMISSIONS:

The Keller Manufacturing Cremation Equipment 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 reaches the maximum locally authorized level.

STEEL CONSTRUCTION SPECIFICATIONS:

A. The structure to be heavy 3" (76.2 mm) steel angle, square tube; 3/8" (9.525 mm) steel plate, seal welded construction.

B. Subfloor to be 3/16" (4.7625 mm) 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: 3000ºF (1650°C) abrasion resistant cast refractory monolithic cast 7" - 13" (177.8 – 330.2 mm) thick, 1 -1/2" (25.4 – 12.7 mm) recessed top and rounded, stressed arched bottom.

B. Chamber Floors: 3000ºF (1650°C) abrasion resistant cast refractory, 5" (127 mm) thick on top of 2" (50.8 mm) 2400ºF (1316°C) light weight insulating castable.

C. Chamber Ceilings: 3000ºF (1650°C) cast refractory, monolithic cast, rounded, stressed arched, 5"-9" thick, topped by 2", 2400ºF (1360°C) light weight insulating castable.

D. Interior Walls: 2800ºF (1538°C) alumina-silicate firebrick, 2 1/2" x 4 1/2" x 9", (63.5 x 114.3 x 228.6 mm) all chambers are backed by 4" (101.6 mm) of 1900ºF (1038°C) ceramic fiber insulation.

E. Stack: Lined with 2-3" (50.8 – 76.2 mm) of 2200ºF (1205°C) 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 or 3 phase, 208-230/460V, 17-15.5/7.6 amp, 7.5 hp air blower motor (1,700 CFM (158 CMM)

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 light detector.

E. Low Air Pressure Safety Switch - Interlocked to all burners.

EXHAUST GAS TEMPERATURE REDUCTION:

Exhaust duct operating exit temperature: 900ºF (482ºC)

HOT AIR DUCT:

10 gauge carbon steel, high temperature 2-3" (50.8 -76.2 mm), refractory lining, pre-drilled flanges, 24" (609.6 mm)
Outside Diameter, 28" (711 mm) at flanges.

UTILITY REQUIREMENTS:

A. GAS:

1. Pressure:
   a) Natural Gas: 12 to 15" W.C. (304mm to 381mm)
   b) Propane: 11-14" W.C. (2.7-3.48 kPa)

2. Flow Rate: 1,500,000 BTU/hr

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

CREMATION CHAMBER LOADING/CLEAN-OUT DOOR:

Hydraulically operated, refractory lined, upward movement guillotine style door with view port. It is a front loading-front cleanout design with cremated remains collection cooling hopper and removal system.

CREMATION PROCESS CONTROL:

The cremation cycle is controlled by a programmable logic control (PLC) system. Visual confirmation of the system status is provided through a Color Touch Screen Panel which displays temperatures, elapsed time, burner operation and other functions. Continuous fuel and air modulation is automatically controlled by a time/temperature actuated system. Operator interface performed through the Color Touch Screen. The Temperature Chart Recorder (if applicable) is a single or dual pen.

EXTERIOR FINISH:

The top and rear compartments are finished with two coats of high-temperature, textured, black polyurethane. The front and side panels are powder coated in a dark grey color. The cremator is trimmed in stainless steel.

TOOLS:

The tools consist of a steel wire brush and rake with long handles, and a short handle rake. A trigger Hand Magnet for removal of metal is also included.