

Charles A. Hones Inc.

Kiln Heating and Repair Guide



Charles A. Hones, Inc. Is a family business that has over 100 years of expertise in Thermal, Heating & Combustion Engineering.

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Buzzer

Burners and furnaces
since 1911

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Venturi High Pressure Nozzle Burner



The Buzzer High Pressure Nozzle Burner offers a powerful and efficient torch type flame using high pressure (1 PSI or more) natural gas or propane. The high pressure burner provides a quick and intense heat without the need for blowers , compressed air, or complicated piping. Our all cast iron design makes Buzzer venturis ideal for metal working, foundry, forging, heat treating, glass working, and ceramic fields.

Model	Nat.gas orifice	LP gas orifice	1 PSI	5 PSI	10 PSI	15 PSI	25 PSI
VNB 125-HP	50	53	41	94	130	160	210
VNB 150-HP	43	48	68	150	212	250	310
VNB 200-HP	1/8	38	125	280	390	480	620

For a full list of all 10 standard sizes, or to ask what size of burner is right for you please contact Charles A Hones, or visit us online at www.charlesahones.com

Venturi Low Pressure Nozzle Burner



The Buzzer Low Pressure Nozzle Burner offers a powerful and efficient torch type flame using low pressure natural gas or propane. The burner provides a quick and intense heat without the need for blowers, compressed air, or complicated piping. Our all cast iron design makes Buzzer Venturies ideal for metal working, foundry, forging, heat treating, glass working, and ceramic fields.

Model	Nat.gas orifice	LP gas orifice	BTU's per hour
VNB 200	17	31	100,000
VNB 250	3	26	150,000
VNB 300	I	16	250,000

For a full list of all 10 standard sizes, or to ask what size of burner is right for you please contact Charles A Hones, or visit us online at www.charlesahones.com

Pottery Kiln Heating Guide

High Fire Kilns

Cone 06 (1,850f) to cone 10 (2,350f). High Fire Kilns are used for bisque firing and glaze firing ceramics and pottery. Kilns may be fiber lined or brick lined. Kilns are typically loaded and unloaded cold and employ a cabinet style door or sealed brick enclosure.

Heating your High Fire Kiln Cone 06 kiln insulated with 4" of 8lb. density fiber insulation requires 10,000 BTU/hr per cubic foot of capacity. Cone 10 High Fire Kiln is insulated with 7" of firebrick (2 1/2" of 2,300f and 4 1/2" of 2,600f brick) requires 15,000 BTU/hr per cubic foot of capacity.

Raku Kilns

Cone 06 (1,850f). Raku kilns are glazing kilns to quickly heat work which has already been bisque fired. Unique and striking patterns are produced by placing hot work into sawdust, leaves and other mediums. To prevent thermal shock, Raku Kilns often have fiber insulation on the hot face, as these kilns are unloaded hot the doors are designed to keep the hot face (surface) away from the operator.

Heating your Raku Kiln Cone 06 insulated with 2" of 8lb. density fiber insulation requires 20,000 BTU/hr per cubic foot of capacity.

Burnout Kiln

Cone 06 (1,850f). Burnout Kilns are used to fire ceramic molds or "burn out" wax patterns used in investment casting or precision casting. Burnout Kilns are often used in bronze sculpture, jewelry making and manufacturing. They may be brick or fiber-lined and often employ a door that faces away from the operator, as these kilns may be used to remove material when hot.

Heating your Burnout Kiln cone 06 insulated with 4 1/2" of 2,300f fire brick and 2" of 2,400f 8lb. density fiber insulation requires 10,000 BTU/hr. per cubic foot of capacity

Burnout Kiln

Cone 022 to cone 10 (1,000f-1,650f) enameling kilns glaze colors and finishes onto glass, metal, or ceramics. They may be brick or fiber lined, and employ a cabinet or flip-down door as these kilns generally loaded and unloaded cold.

Heating your Enameling Kiln cone 022 to cone 010 insulated with 4 1/2" of 2,300f fire brick requires 12,000f BTU/hr per cubic foot of capacity

Salt or Soda Kiln

Cone 06 (1,850f) to cone 10 (2,350f) salt Kilns are Specialty Glazing Kilns in which a crazed or orange peel effect is produced on a clay body. Salt or baking soda is added to the kiln at high temperatures (through a salt port) and vapors interact with the clay body to form a glaze on the outside surface of the ceramic form. Salt kilns are corrosive and produce chlorine fumes. A dedicated brick kiln is loaded and unloaded cold, so a cabinet or bricked up enclosure are common.

Heating your Enameling Kiln cone 10, insulated with 9 1/2" of firebrick, (4 1/2" of 2,300f brick and 2 1/2" of 2,600f firebrick and 2 1/2" of hard brick) requires 30,000 BTU/ hr per cubic foot of capacity.

Insulation

Fire Brick

- Soft brick-gas kiln insulation rated for 2300°F, 2600°F, 3000°F
- Hard brick-salt, soda, and wood kiln insulation, rated for 3000°F

Fiber

- Fiber board rated for 1900°F, 2350°F



Baso safety Valve

-High Pressure up to 25 PSI

- H19LA-1 flow interrupter 3/8" valve
- H19RA-2 no flow interrupter 3/8" Valve

-Low pressure up to 1/2 PSI

- H15DA-1 3/4 " valve



Thermocouple

Type "K" thermocouples -

- For sensing the temperature of ovens, kilns, furnaces, forges, and other high temperature processing equipment.



Repair

Grefpatch

- 85% Alumina phosphate bonded patching plaster, for use on refractory linings on both metal and non metal contact areas

Motor

- Low shrinkage brick glue available in sizes from 1 quart to 5 gallons

Castable insulation

- Both structural (dense) and insulating (lightweight) available

