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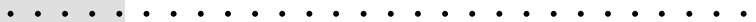
Electroglass[®]

High Temperature Furnaces and Control Systems



World Class Studio Furnaces
 Economical • 100 to 1000-pound Glass Capacity
 Quiet • Safe • Non-polluting • Silicon Carbide Elements
 Pneumatic Door • Honeywell Temperature Controller
 100-pound Batch Furnace: \$17444 • **\$300 mo / 60-month Lease**

<http://www.electroglass.com>



Electroglass® Series 9000 Studio Furnaces

Prices in US Dollars • Effective January 2016

Glass Capacity in Pounds Maximum Amperage	Idle Power Kilowatts	Maximum Power	Subtract if You Make the Steel Base	Base Price
100# effective - 125# theoretical 240 Volts - 40 Amps	< 2	9.6 kW	-\$850	\$17,444
175# • 240 Volts - 50 Amps Two Starbars®	2	12 kW ♠	-\$850	\$21,845
250-A • 240 Volts - 50 Amps Two Starbars®	< 2.5	12 kW	- \$850	\$22,850
250-B • 240 Volts - 70 Amps, 1Ø Three Starbars® - 40 Amps 3Ø	2.5	16.8 kW	- \$850	\$24,500
350# • 240 Volts - 90 Amps, 1Ø Three Starbars® - 52 Amps 3Ø	3	21.6 kW ♦	-\$850	\$27,100
450# • 240 Volts - 100 Amps, 1Ø Three Starbars® - 58 Amps 3Ø	4.5	24 kW	-\$1,275	\$33,170
775# • 240 Volts - 120 Amps, 1Ø or 480 Volts – 65A 3Ø Four Starbars®	6	29 kW	- \$1,500	\$44,400
1000# • 240 Volts - 180 Amps 1Ø or 480 Volts – 52 Amps 3Ø Six Starbars®	12	43.2 kW	- \$1,800	\$53,200
Bottom-drain Casting Furnaces Custom Volume or Continuous Melt Variable Voltage and Amperage	NA	24 - 48 kW	Does Not Include Steel and Scaffolding	From \$58,245 P.O.R
Glory No. 1622 - 12", 8" and 6" holes with Plug • 240 Volts – 70A Single Ø, Two Starbars®	< 3	16.8 kW	Included	\$18,500
Glory No. 1630 - 12", 8" and 6" holes with Plug • 240 Volts – 100A Single Ø or 58 Amps Three Ø Three Starbars®	< 3	24 kW	Included	\$24,995
Fusing Kiln / Color Pot Furnace Eight 16"-dia. Pots • Top Loading Annealer • From 240 V, 25A	NA	From 6 kW	Included	From \$14,500
Front Loading Annealer (Custom Sizes) • From 240 V, 25 Amps Both Single Ø and Three Ø	NA	From 6 kW	Included	From \$14,500

Notes:

Idle Power = the minimum kilowatts needed to maintain a full tank of glass at 2100°F. Melting Power = (Maximum Power) - (Idle Power).

Selecting a furnace without the steel base will result in a substantial savings. You will also avoid paying freight on the steel. In this case we supply CAD drawings so that you can have the base welded locally. Specifications are for standard structural steel in either inches or metric.

The 250-B furnace can be upgraded in the future to the 350 furnace. The 350 and 450-pound furnaces can be upgraded to larger capacity furnaces in the future. Kits are available for modifying older furnace bases, so that one can upgrade to a larger size furnace.

(♠) The cost to operate the 175-pound furnace in a production studio, working, charging, etc., is approximately \$260/mo. At 7¢ / kwh (based on customer feedback). The 175 is an upgrade to the original 150-pound furnace.

(♦) The 350-pound furnace costs approximately \$350 per month at 7¢ / kwh in a production studio (based on actual electric bills).

The 250-B, 350, and 450-pound furnaces have three Starbars[®] with three SCR power controllers. Electrical dimensions are given for 240 volts, single phase. The ampere value is given for full power, which is used only during the melting of batch or cullet. If you have 3Ø, you can reduce the number of amperes required. Three phase is available in 208, 240, 400, 480, and 575V AC, 50/60 Hz, now at no additional cost.

All Series 9000 furnaces now include as standard: (1) Electroglass[®] state-of the art Control Console with a Honeywell UDC 2500 microcomputer for programming time/temperature profiles, and (2) a foot-actuated, pneumatically operated, steel door assembly, pre-fitted with high temperature air plumbing and regulator. The door which is magnetically coupled to an air piston, rides on a rodless, glide rail system.

Starbars[®]

Our heating elements are made from the mineral moissanite (silicon carbide), custom manufactured to Electroglass[®] specifications. Starbars[®] have a useful life of up to three years in the two-element furnaces, and longer in the larger furnaces with three or more elements. **Some owners of furnaces and glory holes have reported element life exceeding 11 years (call for references).** It takes less than ten minutes to replace an element while the furnace is at working temperature. Elements are not subject to thermal shock, so a cold element can be placed directly into a hot furnace. Elements are not damaged by most popular powdered glass batches, such as Spruce Pine, California Electric Batch, Glasma H71, Philips- Electroglass[®] pellets, No. 2660 and 2665 or Spectrum's 2.0 Premium nuggets.

Installation Service and Technical Support

Three-day on-site assembly and startup service for most locations within North America is \$8000. For most locations in Asia, Europe, and South America, add \$12,000. **Technical support is free, 24 hours, 7 days per week by phone: US 269-668-2855 or by e-mail: support@electroglass.com.**

Purchase Terms and Business Leases

If we ship from inventory, terms are prepayment with your purchase order. If the furnace is not in inventory, and we have to cast the refractory parts, a 50-percent deposit is required with the order. The balance is due at the time of shipment. Customers outside of the United States should arrange to wire funds to our bank. Prices are F.O.B. Kalamazoo, Michigan, USA. We offer a freight discount for shipments within the United States. Business leases start at about **\$300/month**, plus interest, for sixty months with a \$1.00 buyout at the end of the lease. A security deposit in the amount of the first and last month's payment may be required. Business lease payments are tax deductible, and interest rates may vary, depending upon credit and the prime rate at the time the lease is negotiated.

*How to EARN up to **\$165,000** from the IRS and get your Electroglass® furnace FREE!*

The U.S. Government actually pays you to buy new equipment. Under IRS Section 179, your business can lease equipment and deduct up to \$500,000 as an immediate tax write-off the first year the equipment is placed in service. If you are in the 33% income tax bracket, your cash savings could be up to \$165,000!

You might also qualify for a **TAX CREDIT** for replacing your old gas furnace and glory hole with an energy efficient Electroglass® furnace or glory hole. Please consult with your tax advisor or accountant.

Example 60-Month Leases with 7% Interest • Call (269) 668-2855

Prices and specifications are subject to change without notice.

Furnace	Cost	Monthly Payment
100-pound	\$17,444	± \$300
Glory Hole - 1622	\$18,500	± \$365
175-pound	\$20,995	± \$415
250-pound	\$23,650	± \$444
Annealers	From \$14,500	From \$287



With PayPal: No Payments and No Interest if paid in full in 6 months.

Electroglass[®] *Series 9000 Furnace* *Specifications - 2015*

Physical Dimensions (inches/pounds)

175-Pound Furnace: 42w x 44d x 60h / 1900
250-Pound Furnaces: 42w x 48d x 60h / 2000-2250
350 Pound Furnaces: 42w x 54d x 63h / 3000-3350
450, 550 and 650 Pound Furnaces: 54w x 55d x 72h / 4000-4250

Electrical Requirements

STANDARD: 208-240 Volts - Single Phase AC, 50/60Hz,
and Three Phase: 208 to 575 Volts AC, 50/60Hz.

POWER: Phase angle controlled. When elements are new, voltage will be lower, and amps will be higher.

175-Pound Furnace: 12 kW (50 Amps max.)
250-Pound Furnace: 12 kW (2 elements: 50 Amps max.), 16.8 kW (3 elements: 70 Amps max.)
350-Pound Furnace: 21.6 kW (90 Amps max.)

Heating Elements

Electroglass[®] elements are high density, reaction bonded silicon carbide Starbars[®], manufactured to our exacting specifications. Most soda lime glass batches have no effect on the elements. The Electroglass[®] glass pellets, EG-90 and EG-96, are available from East Bay Batch Co. (510-233-0708). This is a bright soda lime barium crystal, specially designed for Electroglass[®] furnaces and Kugler and Gaffer Batch color rods. Other good batches include Spruce Pine, California Electric Batch (East Bay Batch Co.), Glasma H71, and Spectrum's 2.0 Premium nuggets.

Life expectancy of the heating elements with soda lime batch is up to 3 years in the 2-element furnaces, and up to 4 or more years in the 3-element furnaces. Some owners report 11+ years (please call for references).

Elements are positioned horizontally, safely out of the way, above the gathering port. Electrical connections for the elements are on the back of the furnace. The element safety cover box comes pre-wired to the furnace control panel. Hooking up elements is as simple as sliding the element into the sleeve, dropping the connectors over two 3/8-inch bolts, and tightening

the nuts. Replacing an element is an easy 10-minute task; there is no downtime. A cold element is inserted directly into a hot furnace. Elements do not thermal shock; in fact, they become stronger at higher temperatures.

Power Control

Each element is controlled by its own phase-angle fired SCR Power Controller. Should one element fail, the remaining element(s) will keep the furnace operating. Manual controls allow each element to be tuned for maximum life. Voltage and current are automatically varied to provide the most economical, minimum power usage for optimum efficiency. Compensation in voltage for the change in resistance with age of the heating elements is automatic.

Temperature Control

Honeywell UDC 2500 Digital Controller with ramp and soak programming for running firing profiles. Thermocouple is R-type platinum - 13% Rhodium with quick disconnect cable. Thermocouple Failure Protection: Automatic switch over to fail safe, idle power.

OPTIONAL: (1) Temperature Chart Recorder and Computer Interface.
(2) Alarm system with telephone dialer.

Safety System

A fail safe sensor detects door position, and turns the power off to the elements when the door is open.

Glass Tank and Superstructure

The tank is a rectangular shape with rounded inside bottom and corners optimized to prevent thermal cords. The tank and superstructure are cast and fired in one of many available compositions at the Emhart Glass, Laclede Christy plant. Normal life expectancy of the glass tank is two to three years on soda lime glass. Soda lime glass has no effect on the superstructure. Unlike in a gas-fired furnace, in an electric furnace glass vapor does not exist, so it cannot coat the superstructure or crown.

Tanks can be invested in the larger furnaces.

Gathering Port

STANDARD: Seamless 10½ x 10½ arch-shaped top, vertical sides, and flat bottom that slopes toward the glass. Glass can not run out and stick the door. The Gathering Port is made of fused silica, and will not crack. Four to six years life expectancy is normal with soda lime glasses.

OPTIONAL: A larger Gathering Port is available for the 650 and larger furnaces. Custom sizes and shapes can be made to order.

Front Refractory

The Top Arch Block through which the Gathering Port is inserted is made of fused silica, and holds up well to glass attack from soda lime batch. Life expectancy is six years or more with Electroglass® pellets. It will be less with more corrosive glasses. The Bottom Port Support Block is also made of fused silica.

Door

The door opens horizontally on three, stainless steel, precision glide rails. The door carriage is magnetically coupled to a pneumatic piston that travels inside of the center glide rail. A foot pedal air valve controls the door position. The door can be opened to any position where it will remain until the operator steps on the pedal again. Then it can be either opened further or closed. The speed is adjustable. The furnaces come pre-plumbed with high temperature stainless steel air hoses and regulator. A single 100 psi air supply line is required.

Door Liner Tile

The door, which is an insulated stainless steel box is protected by the Door Liner Tile. It is made of fused quartz, and is designed to withstand extreme and sudden temperature changes, as well as glass attack. Life expectancy with soda lime glass is up to four or more years. The door can not stick.

Insulation

State-of-the-art ceramic fiber and board combinations of various densities are used to achieve a remarkably superior insulating value. The furnace sides, back, and top are made from a structural material, 1 inch of which is equivalent in insulating value to multiple inches of ceramic blanket. When the inside of the furnace is 2200°F, the outside is only 112°F. The exterior of the furnace is U.S. Coast Guard and U.L. certified as non combustible.

Modular Construction

The base and frame is welded from 3/16-inch standard structural steel, and is on casters so that it can be moved. The upper frame corners are held together with 3/4-inch threaded rod, which allows easy adjustment for minor expansion and contraction after initial heat up. This modular design facilitates ease of construction, which usually takes about one day. The furnaces come apart easily and quickly when it is necessary to replace the crucible.

Installation and Startup Service

On-site supervision of assembly and startup service is available. The cost is as follows:

Most places in North America: \$8,000

Asia, Europe, and South America: \$12,000

Warranty

One-year, extendible Warranty on electronics. All other parts are covered for defects in manufacturing, but not for breakage, normal wear, or glass attack.

DESIGN, SPECIFICATIONS AND TERMS ARE SUBJECT TO MODIFICATION WITHOUT NOTICE

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support@electroglass.com

Electroglass[®] *Series 8000 Studio Furnaces*



Glory Hole 1624 with reducing ring – 175-Pound capacity Furnace



Glory Hole 1616 (left) - Stacked Electroglass[®] Annealers – Furnace (right)

Electroglass® *Series 8000 Studio Furnaces*



Electroglass® Annealers (left) – Electroglass® 250-pound capacity Furnace (right)



Electroglass® Fusing-Casting Kiln (left) – 350-pound capacity Furnace (right)

Electroglass®, P.O. Box 908, Portage, MI 49081-0908
Toll Free Phone: 877-540-9444 • Leasing: 800-800-8081 x222 • Fax: 269-668-7778

All Electric Electroglass® Studios™



Dcampana Glass Studio, Calvi, Corsica, France – All Electric Studio™
Electroglass® Furnace 250-B, Annealer FL-483624, Glory Hole



Dcampana Glass Studio, Calvi, Corsica, France – All Electric Studio™
Dominique Campana Gathering from Electroglass® Furnace



Dcampana Glass Studio, Calvi, Corsica, France – All Electric Studio™
Dominique Campana Working with the Glory Hole