





## WET DOG GLASS

Since 1996, Wet Dog Glass, LLC has worked with clients to develop and produce the best glass studio equipment money can buy. One of our highest priorities is to research and develop new systems that are more efficient in their energy consumption.

Our newest development, the round day tank, is the culmination of years of experience and comprehension in art glass furnace functionality, ergonomics, insulation, atmosphere control and heat reclamation. These models are now available in either gas or electric configurations. We are now building electric furnaces for those customers who's electric service is generated by hydro-electric, wind or solar. We are continuing to experiment with the use of several waste or byproduct liquid fuels and forging ahead with development of heat reclamation systems. The time ahead looks very exciting as we merge our art making habits with sustainable studio environments. Please visit our News and Spotlight Projects pages on our website for updates, [www.wetdogglass.com](http://www.wetdogglass.com)!

On behalf of the entire staff at Wet Dog Glass  
Thank you for your support!

Eddie Bernard  
Wet Dog Glass, LLC



Each piece of powered equipment we build wears a "Dog Tag." This tag indicated the Wet Dog Glass model number, power required, maximum temperature intended and in the case of electric kilns, the wire type, gauge and resistance of the elements. This important information is a must-have when an inspector walks into your shop.

Wet Dog Glass can now offer customers UL listed temperature control panels. See pages 11 and 15.



Wet Dog Glass team strategy meeting, Star, NC.

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**GENERAL**

All orders shall be subject to the approval and acceptance of Wet Dog Glass, herein after referred to as the Company, at its office in Star, NC. Purchaser must express in writing to the Company any objection Purchaser has to the terms and conditions contained herein within five (5) days of receipt of this document, otherwise assent to the terms and conditions herein shall be conclusively presumed. All Company quotations or proposals, all acceptances of Purchaser's orders, and all sales by the Company are expressly limited to, and expressly made conditional upon, the Purchaser's acceptance and assent to the Standard Terms and Conditions of Sale as set forth herein, notwithstanding receipt of, or acknowledgment of, the Purchaser's order form or specifications containing additional or different provisions, or conflicting oral representations by any agent or employee of the Company. No waiver, change or modification of any terms or conditions on the face or reverse hereof shall be binding on the Company unless made in writing and signed by an officer of the Company.

**PRICES AND TERMS**

All prices are subject to change without notice. Quotations are subject to changes after a period of 30 days. Prepayment in full required on orders valued below \$50,000, unless agreement made otherwise. Any order valued at \$50,000 or more for non-standard material shall be subject to progress payment terms. Net 30 terms are subject to approved credit. Any order originating outside the contiguous United States, Alaska, Hawaii, or Canada may be subject to an Irrevocable Letter of Credit confirmed by a U.S. Bank or a sight draft. If, at Purchaser's option, completion of manufacturing is delayed beyond 180 days after receipt of an order, starting on that date a price escalation of 1% per month of the gross order amount will apply. Further, if at the Purchaser's option, shipment of an order is delayed more than ten days after completion of manufacturing, Purchaser will be invoiced at that date and will be responsible for any storage or other costs involved. The Company reserves the right to ship equipment and invoice for same even though minor components are back-ordered, if the missing items are late due to circumstances beyond the Company's control and said components will not prohibit initial installation work by the Purchaser. A finance charge at a rate of 2% per month (annual percentage of 24%), or the maximum allowable rate, whichever is less, will be added to unpaid invoices over 60 days old; said interest shall relate back and commence from the date of invoice.

**PERFORMANCE GUARANTEE**

The Company guarantees to the original purchaser that the equipment of its manufacture will perform at rated parameters as stated only when (1) properly installed, connected, started, operated and maintained in accordance with Company Instruction (s), and/or Information Guide(s), as revised from time to time, and (2) used for the applications specified and (3) used in the environments as specified or as limited. If equipment is part of a greater system, the Company accepts responsibility only for the equipment manufactured by it, and only when Purchaser complies with the restrictions herein. The Company shall not be responsible nor liable for any claims and/or losses, either direct, incidental, consequential, punitive or otherwise arising out of the selection of its products to fulfill the requirements of any plans and specifications not prepared or approved by the Company. Due to the nature of fuel fired equipment, its controls and accessories, there will always exist an explosion and fire hazard. To minimize such hazards, this equipment must be installed, operated, and maintained in accordance with the appropriate instruction(s) and/or information guide(s), as revised from time to time. Purchasers of the Company's equipment waive subrogation on all items covered under their own or other insurance.

**LIMITED WARRANTY ON THE EQUIPMENT ITSELF**

The Company, for a period of one year from shipment, warrants each product or system of its own manufacture, with the exception of burner blocks and other refractory materials (which the Company does not warrant), to the original purchaser to be free from defects in material and workmanship under normal use, service and maintenance. Normal use, service and maintenance means: a. Not in excess of the maximum temperatures, volumes or other parameters specified in the Company's Product Bulletins, Specification Sheets, and/or quotation(s). b. Using only fuels specified in the Company's Product Bulletins, Specification Sheets, and/or quotations. c. Operation and maintenance in compliance with the appropriate Instructions and/or Information Guides. Products or goods not of Company manufacture supplied in piece, or as components to a system designed or sold by the Company, are not covered by this warranty other than any adjustment or warranty obtained from the manufacturer of that component or product to the extent that such adjustment or assignment of warranty is not prohibited. This warranty does not apply to damage caused by any or all of the following circumstances or conditions: a. Freight damage, as Purchaser's remedy for any such damage shall be from the carrier. b. Parts and/or accessories or components not obtained from or approved by the Company. c. Any consequential or incidental damage arising from the use of the product, system or other goods manufactured or sold by the Company. d. Misapplication, misuse, abuse, and failure to follow the Product Instruction Sheets and/or Information Guides. The sole and exclusive remedy under this warranty for any claim of damage in connection with the sale or furnishing of materials by Company shall be limited to the repair or replacement, without charge for labor or materials, of any parts found upon examination by the Company to have been defective, and shall not include field erection costs, if any, involved in the exchange. The remedy shall be conditioned upon receipt of written notice by the Company of any alleged defects promptly after discovery thereof within the warranty period, and shall not be deemed to have failed of its essential purpose so long as Company is willing to repair or replace any defective parts or materials. Generally, consent for the return of items to Company, if given, will be upon the condition that the purchaser assumes and prepays all carrier charges. This warranty is exclusive. The Company expressly disclaims any and all other warranties, whether express or implied, including any implied warranty or merchantability or fitness for a particular purpose. No person, including any dealer or representative of the Company, is authorized to make any representations concerning the Company products or systems on behalf of the Company or to assume for the Company any obligations beyond those contained in this warranty. The Company reserves the right to make design and other changes, modifications or improvements upon its products or systems, without any obligation to install same on any previously sold or delivered products or systems.

**LIMITATION OF LIABILITY**

It is expressly agreed that the Company's liability is limited as stated herein. If the Company should be found liable to anyone in any theory (except any express warranty where the remedy is set forth in this document) for loss, harm, or damage, the liability of the Company shall be limited to the lesser of the actual loss, harm, or damage, or the original purchase price of the involved equipment, system or service when sold (or when service performed) by the Company to its Purchaser. This liability is exclusive and regardless of cause or origin resulting directly or indirectly to person or property from: a. The performance or non-performance of any obligation set forth in this warranty; b. Any agreement, oral or written, including specifications, between the Company and the Purchaser. c. Negligence, active, passive or otherwise, of the Company or any of its agents, employees, or independent contractors. d. Breach of any judicially imposed warranty or covenant and, e. Misrepresentation or strict liability involvement. Purchaser shall indemnify and hold the Company harmless against any and all debts, obligations, costs and damages, including attorneys' fees, rising from any claims or causes of action, whether in law or equity, or arising in contract, tort or otherwise, which may be asserted against the Company by any person or entity not a party to this Agreement, resulting from the subsequent sale by Purchaser or the reinstallation by Purchaser, use, repair, maintenance or decision to purchase the goods and materials described herein, provided, however that this indemnity and hold harmless provision shall not apply to the Company's own acts of willful misconduct in the initial production thereof.

**DELIVERY**

The quoted time of delivery is understood to be from date of receipt of all necessary information including Purchaser's approval, if applicable. Any delay in delivery of any installment shall not relieve purchaser of its obligation to accept remaining deliveries. The Company shall not be liable for damages or for cancellation of the contract as a result of any delay due to any cause beyond the Company's reasonable control including, but not limited to, act of God, act of the purchaser, embargo, or other governmental acts, regulations or requirements, fire, accident, labor disputes, war, civil insurrection or riot, delay in transportation, or the inability to obtain necessary labor, materials, or manufacturing facilities. In the event of any such delay, the date of delivery may be extended for a period equal to the time lost by reason of the delay. All shipments, unless otherwise specified, shall be FOB shipping point (dock) and the Purchaser assumes responsibility for damage or loss in transit. Inspection of products shall occur at the Company's place of business, conducted by Purchaser's authorized representative. It is agreed that the Purchaser shall notify the Company of any shortage within fifteen (15) days from receipt of the material. In the event of loss or damage incurred in transit, claims for parts broken or lost in shipment are to be filed with the transportation company by the Purchaser. Purchaser bears the risk of loss during transit.

**PACKAGING**

All list prices representing products manufactured by the Company are subject to addition of crating fees.

**CANCELLATION OF ORDERS**

If, for any reason, the purchaser desires to cancel an order, such cancellation shall only be with the consent of the Company, and then only after payment is made to the Company in cash of the following cancellation charges: (i) 15% of the purchase price for any order cancelled before orders for materials are placed by Company; (ii) 50% of the purchase price for any order cancelled after orders for materials are placed by Company and before Company begins any fabrication of Product to fill such order; (iii) 100% of the purchase price for any order cancelled after Company begins such fabrication.

**RETURNS AND RESTOCKING CHARGES**

Because most of the Equipment sold by the Company is made to order, Equipment may be returned only upon prior written authorization of the Company. Generally, consent, if given, will be upon the condition the purchaser assumes all carrier charges, responsibility for damages in transit, and a restocking charge, and then only if the so authorized material is in new and unused condition and returned within one year from the original date of shipment. The credit will be based on the original invoice price or the current price, whichever is lower, less the applicable restocking charge.

**SERVICE**

Unless otherwise noted herein, the cost of the equipment does not include service or installation. All services performed by the Company are subject to purchaser's payment of the Company's prevailing charges plus necessary travel and living expenses. Wet Dog Glass technicians are not licensed electricians or plumbers and will not perform any duties that require professional licensing. Customer is responsible for hiring and expense of any licensed professional to connect/wire Wet Dog Glass systems or components to utilities. Wet Dog Glass offers technical support via phone and on-site for a fee, call for rates. Technical support does not include duties which require professional licensing.

**TAXES**

Any tax or taxes that may be imposed upon the goods that are the subject of this sale, or upon the sale or delivery shall be added to and become a part of the contract price.

**GOVERNING LAW**

The terms of this agreement shall be construed in accordance with the laws of the State of North Carolina and venue for all disputes shall be in Montgomery County, NC.

These terms and conditions (of any quotation, order confirmation, invoice or statement by Wet Dog Glass, LLC) are in effect as of June 6, 2000. Terms subject to change without notice.



## About Glass Studios

**What is a glass studio?** A glass studio is a workspace designed and arranged to produce hand-blown, hand-sculpted, ladle cast, kiln cast, fused, flame-worked, cut, ground, polished, glued, enameled, painted, etched, bombarded and stained glass. These processes are not mutually exclusive and are often combined. Items can range from one-off unique art pieces to production line items and/or anything in between. Most glass craftspeople tend to call a hot glass studio a “hot shop”. There are also “warm glass studios” or “kiln shops” in which fusing, slumping and bending processes are performed. In a “cold shop” there are machines such as lapidary wheels, belt sanders, and lathes for cutting, grinding, engraving, faceting and finishing glass pieces. Our primary focus has been on hot shops, and each year we have added a product or two that support other studios. We frequently supply entire facilities to support the complete range of glass working techniques by working with other vendors who we feel offer high quality products and services.

Hot shops come in many shapes and sizes to serve different purposes. For example, a small hot shop might be used by a single craftsperson to produce ornaments, paperweights, stemware or other small items. The space and equipment required would be minimal compared to a larger studio where sales volume is high enough to require 3 or 4 craftspeople to work full time. Some hot glass businesses employ 20 people or more and require shipping and receiving areas, larger storage areas for raw and finished materials, as well as more equipment. Many studios function solely as educational facilities where 80 or more students might use the facility for as few as three hours per week each. Some studios exist only to produce glasses of different colors to be sold as raw materials in the form of cullet rods, sheets, or frit for other studios to use in their processes. Several museums have hot glass studios for the education of the general public, where professionals perform demonstrations hourly. Each year more studios are built with the objective of renting studio time to enthusiasts and professionals who are starting or already running their own small businesses, but who either are not financially prepared to or simply not interested in owning their own glass studio. It is important that the proprietor (s) have a clear idea of the function of the studio so that space, equipment, and layout decisions can all be made appropriately.

A typical hot glass studio has a communal furnace that melts raw material so that it can be gathered, ladled or poured to make the final product. Normally the studio will have one or more glory holes for reheating and one or more annealing oven to prevent the glass from developing and/or to relieve it from stress or thermal shock as it cools down to room temperature. The typical glass studio will have at least one bench per glory hole, along with a yoke to support the weight of the pipe while reheating in the glory hole. Heat shields keep the glass blower from receiving the brunt of the heat from the glory hole and generally make the job more comfortable. Most hot glass studios also have cold shops used for surface decoration or finish work. There are many more accessories that you will find in our catalog along with the description of the function of each.

As fuel costs rise, more emphasis is put on efficiency. Efficiency is a philosophy. It is a problem with countless solutions. Efficiency involves not only the equipment selected, but the use of the equipment and space by the operator. We try to do our part by both developing and offering new products and by educating our customers, encouraging you to be actively aware of the issue. Look for items such as variable speed blowers, heat exchangers (recuperators) and double ended glory holes.

The more equipment a studio needs to fulfill its function, the more space it needs. A properly selected/designed studio space will have appropriate gas and electric volume availability, appropriate ventilation, storage space, cold shop space, drainage and zoning. As you read through the pages of our catalog, you will find many helpful, clarifying notes that will give you a thorough understanding of what is involved in the development and operation of a glass studio.



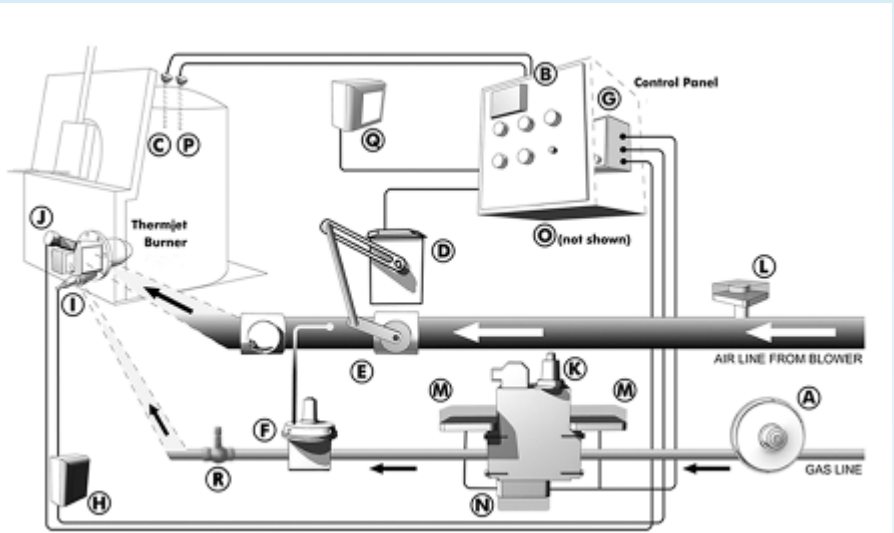
## WET DOG GLASS

# COMBUSTION DIAGRAMS

The **regulator [A]** maintains stable gas pressure over full range of required gas flow. A **programmable controller [B]** reads one of two **Type-R thermocouples [C]** and activates an **actuator motor [D]** which opens/closes the **automatic butterfly valve [E]**. As the air pressure changes, the **proportionator [F]** proportionally adjusts the gas flow. The **ALO valve [R]** provides high-fire gas adjustment. Safety: **Flame monitoring unit [G]** energizes **spark ignition transformer [H]** only after purging the atmosphere inside the furnace with fresh air. It then initiates a trial-for-ignition period of 15 seconds during which the **spark plug [I]** (standard) fires and the main gas valves allow gas flow to the burner. If the **U.V. Scanner [J]** sees a flame, the valves stay open and the spark plug is de-energized. Otherwise the valves close and a manual reset is required. The **Redundant Automatic Shutoff Valves [K]** or DMV-DLE (mandatory on furnaces over 150KBTU/HR) shut off the gas immediately if any of the following incidents occur:

1. Loss of blower pressure sensed by **air pressure switch [L]**.
2. Excessive fluctuations in gas pressure sensed by **gas pressure switch [M]** and **closure proven indicator [N]**.
3. Loss of flame (detected by **U.V. scanner [J]**)
4. **Hi Limit Controller [O]** reads unsafe temperature valve (higher than that at which the furnace can operate safely) from **second thermocouple [P]**.

Optional **automatic dialer [Q]** can be programmed to call three numbers three times each if temperature drops below or rises above given set-point and if gas valves shut.

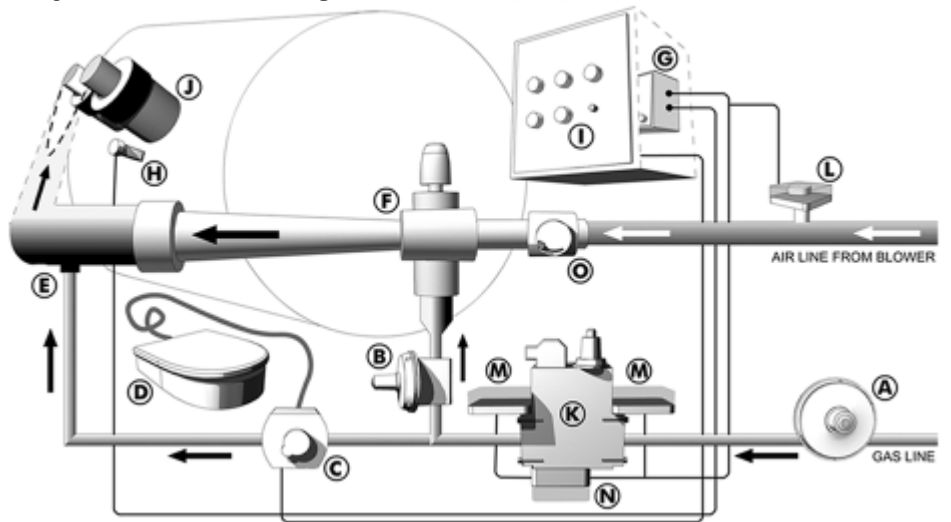


Furnace Combustion Diagram

**Regulator [A]** maintains stable gas pressure over full range of required gas flow. **Zero-governor [B]** maintains proportional gas flow to the corresponding, desired air pressure. Optional **reduction pedal system [D]** uses **solenoid [C]** to boost gas flow around **gas/air mixture [E]** creating a gas rich mixture and flame that reduces certain glass colors. Premix systems are noted for their ability to mix air and gas very intimately so that the flame is a very hot one that burns quickly and efficiently. **Eclipse Combustion's low pressure proportional mixer [F]**, when used with a zero governor, maintains a user-defined gas-air ratio throughout the operational range. This means that to adjust the flame from high to low, the user needs only to adjust the **butterfly valve [O]** setting, and the gas will be adjusted automatically. The result is a savings in fuel and time. We use these proportional mixers primarily on glory holes, though they may also be used on furnaces. **Flame monitoring unit [G]** continually checks the **U.V. Scanner [H]** for a flame. The **Control Panel [I]**

**Spiral Arts Glory Hole Burners [J]** widely acclaimed for their excellent flame stability and quiet operation, these round burners are easy to install and exceptionally durable. **DMV/DLE [K]** **Air pressure switch [L]** **Safety components [M+N]**.

Glory Hole Combustion Diagram





**Blowers**

Nearly 100% of the gas fired equipment we build that requires forced combustion air is fitted with an independent variable speed blower. This setup results in the lowest electric consumption of any setup available, providing "on demand" supply of air as individual units are sped up, slowed down or turned off. The Ametek regenerative blower is our preferred choice for furnace and smaller glory hole VSB Combustion Packages.

The Spencer Vortex blower is a single stage blower that includes a variable frequency drive to control the blower proportionally. We use this blower in our larger model glory hole VSB Combustion Packages. The single-sided impeller with single vortex generates less heat and noise than conventional "paddle wheel" designs. The variable frequency drive (VFD) provides a greater range of adjustment on the blower output, resulting in a much more comfortable glory hole to work out of.

Another option is a fixed speed blower, which provides air to all equipment in the studio. This way, we can install the blower outside where the fresh air is and where the noise can dissipate faster. Eclipse blowers are made of continuous welded, heavy gauge steel. The impellers are made of light weight, high strength, riveted aluminum. Filters and rain hoods are available.

See Furnace packages on page 11 and Glory Hole packages on page 12 for VSBs installed in enclosures.



**Ametek Blower**



**Spencer Blower**

**Typical Blowers for Glass Studios**

Variable Speed	Voltage	Energy Consumption (CFH)	"w.c.	Price
Ametek 250W.....	120VAC.....	250W.....4400	20	\$665.00
Spencer 1200W.....	240VAC.....	1200W.....5200	20	\$1,197.50

Fixed Speed	Motor HP	Capacity (SCFH)	"w.c.	Price
Eclipse – SMJ4616-1 .....	1.....	16,500.....	20.2.....	\$3,037.00
Eclipse – SMJ3619-1 1/2 .....	1-1/2 .....	15,300.....	27.0 .....	\$3,118.00
Eclipse – SMJ3619-2 .....	2.....	20,000.....	27.0 .....	\$3,121.00

\* All motors are Totally Enclosed Fan Cooled (TEFC)

**Spiral Arts Glory Hole Burner Nozzles**



We make these round ceramic burner nozzles, and they are the quietest ones we know of. Use 1 small burner for glory holes 12" dia. or smaller, use 2 small burners for glory holes 15" to 18", use 2 large burners for glory holes 21" to 24", and four large burners for 27" to 30" glory holes.

Model #	Dimensions	Price
Small.....	3 3/4" o.d., 2" NPT .....	\$140.00
Large .....	4 3/4" o.d., 2" NPT .....	\$165.00

**Sticktite Burner Nozzles**

Sticktite burner nozzles are flame retention nozzles made of cast iron. This material works well if it stays cool – a good choice for pipe warmers and garages. To use this chart simply select the nozzle with the appropriate inlet size to match the outlet size of the mixer you will use.

Model #	Inlet Size	Price
ST 204-18 .....	1" .....	\$50.00
ST 205-28 .....	1 1/4" .....	\$65.00
ST 206-36 .....	1 1/2" .....	\$81.00
ST 208-46 .....	2" .....	\$105.00



**Eclipse Thermjets**

These are high-performance, high-velocity nozzle mix burners with a potential turndown ratio of 50 to 1. This means a properly selected model will idle at a very soft, very quiet setting, yet offer all the flame and power you need to cook glass quickly. These burners exhibit the cleanest emissions qualities in the business and are extraordinarily flexible in terms of installation. Choose "PCA" models for use with preheated combustion air. Please specify Natural Gas or Propane and refractory or silicon carbide combustion.

\*See page 11 for combustion packages.

**TJ040**



**PCA models**



Max BTU/hr	Standard Model #	Price	PCA Model #	Price
250,000.....	TJ025 .....	\$1,040.00 .....	TJ025PCA .....	\$1,246.00
400,000.....	TJ040 .....	\$1,040.00 .....	TJ040PCA .....	\$1,246.00
500,000.....	TJ050 .....	\$1,315.00 .....	TJ050PCA .....	\$1,521.00
750,000.....	TJ075 .....	\$1,315.00 .....	TJ075PCA .....	\$1,521.00
1,000,000 .....	TJ100 .....	\$1,474.00 .....	TJ100PCA .....	\$1,680.00



**Injectors**

More commonly known as "Venturi" mixers, these mixers use the gas flow through the orifice to entrain the air required for combustion. They can be used with low or high pressure natural gas or propane. Because propane requires 2.5 times the amount of air that natural gas requires to burn completely and efficiently, the propane mixers feature an additional sleeve, which aids in the entrainment of air. We commonly use these mixers on garages and pipe warmers, but we have successfully used them on glory holes, and furnaces as well. The chart below shows aspects of the models used on our equipment. Please contact us for information on other sizes or for use with other gases. Refer to the Sticktite table on page 6 for nozzle sizes and prices.

**Atmospheric Injector**



**Compound Injector**



Model #	Maximum BTU/hr	Inlet Gas type	Mixture Pressure*	Output NPT	WDG Equipment	Price
T-4	25,000	Natural	< 1 PSI	1"	PW20	\$222.00
T-5	40,000	Natural	< 1 PSI	1 1/4"	PW29	\$243.00
T-40	27,000	Propane	< 1 PSI	1"	PW20	\$337.00
T-50	45,000	Propane	< 1 PSI	1 1/4"	PW29	\$409.00
TR-6	55,000	Natural	< 1 PSI	1 1/2"	GA1	\$263.00
TR-60	62,000	Propane	< 1 PSI	1 1/2"	GA1	\$481.00
TR-8	90,000	Natural	< 1 PSI	2"	GA2	\$274.00
TR-80	100,000	Propane	< 1 PSI	2"	GA2	\$554.00
H-40	25,000	Propane	> 1 PSI	1"	PW20	\$270.00
H-50	62,000	Propane	> 1 PSI	1 1/4"	GA1	\$322.00

**Proportional Mixer Dimensions**

Model #	Gas Inlet Size	Air Inlet Size	Mixture Outlet Size	Price
64-LP	1" NPT	1 1/2" NPT	1 1/2" NPT	\$344.00
84-LP	2" NPT	2" NPT	2" NPT	\$502.00



**Proportional Mixer**



**Gas and Air Pressure Switches**

Model #	Prices
AA-A2-6-2	\$91.00
AA-A2-6-5	\$91.00
GAO-A2-4-5	\$105.00
GAO-A2-4-6	\$105.00
GAO-A4-4-5	\$105.00

**Ignition transformer**

Model #	Price
120/6000VAC	\$147.00



**Proportionator / Zero Governor**

Model #	Price
FRG705/6 1/2" NPT	\$182.00
FRG707/6 3/4" NPT	\$188.00
FRG710/6 1" NPT	\$209.00



**ALO (adjustable limiting orifice)**



Model #	Price
3/4" NPT	\$141.00
1" NPT	\$148.00
1 1/4" NPT	\$244.00

**Regulator**

Model #	Price
1/2" NPT, 1/2 PSI outlet	\$70.00
3/4" NPT, 1/2 to 1 PSI outlet	\$103.00
1" NPT, 1/2 to 1 PSI outlet	\$103.00



**Ball Valve**



Model #	Price
1/2" NPT	\$16.00
3/4" NPT	\$20.00
1" NPT	\$28.00

**DMV / DLE Dual Safety Valves**

Model #	Price
701/602	\$886.00
702/602	\$1,065.00



**Adjustable Orifice Gas Cock**



Model #	Price
1/2" NPT	\$88.00

**Butterfly Valves**

Model #	Price
1 1/2" NPT	\$98.00
2" NPT	\$108.00
2 1/2" NPT	\$124.00



**Pilot-Gas Solenoid**



Model #	Price
1/2" NPT	\$195.00

\* Please specify manual or automatic, full or reduced port.

**Butterfly Valve Actuator**



Model #	Price
Actuator Motor 423-5	\$623.00
Mounting Kit	\$73.00

**Flame Supervision**

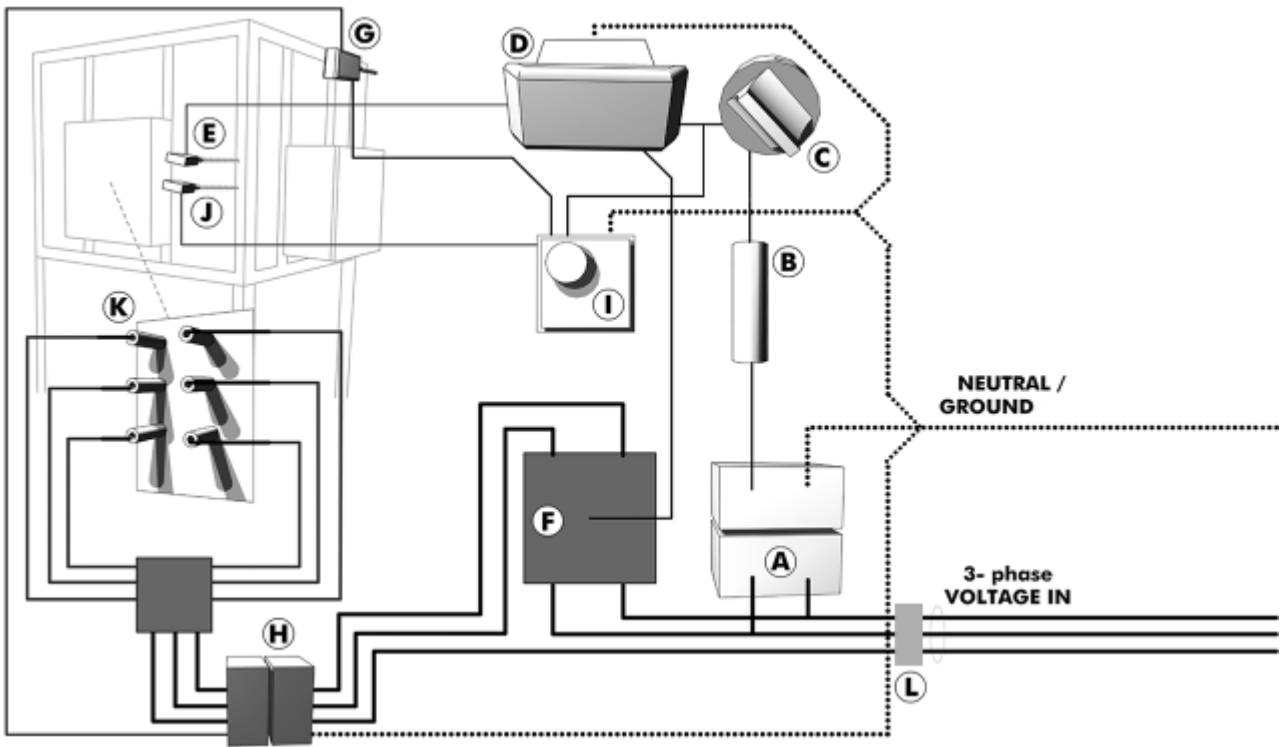
Model #	Price
Veriflame	\$638.00
UV Scanner	\$324.00





### Annealer Electricity

In the example below, the annealer is powered by 3-phase electricity. However, we can configure any annealer to work with your available power. As the three wires enter the control panel from the power source, two of the three legs enter a **transformer [A]** which converts the power to a single phase 120 volt leg and a neutral leg. This will supply power to the components that require single phase power without having to run an additional power cord. The 120 volt line passes through a **fuse [B]** and an **on/off switch [C]**. If the switch is turned to “on,” a **Programmable Temperature Rectifier [D]** is powered. The controller reads a **Type-K thermocouple [E]**, which indicates the temperature inside the annealer. The controller sends a signal to the **Silicon Controller Rectifier (SCR) [F]**, which controls power to the annealer’s heating elements until the controller’s setpoint (target temperature) is reached. We recommend SCRs because they have no moving parts. When installed properly, they have a long lifespan; they increase the life of heaters up to 125 times when compared to mercury relays and electromechanical relays, and they provide a very constant heat with no over or under-shooting. For safety, all of our annealers are equipped with a **limit switch [G]** for each door. The switch acts as an interlock. If an annealer door is opened, it will break the power to the **definite purpose contactor [H]**, which disconnects the power to the elements via the **junction box [K]** located on the back of the annealer. We also offer a **Watlow SD6L high temperature limit switch [I]**, which reads the annealer’s temperature from a **second thermocouple [J]**. If the temperature exceeds the set limit it will break the power to the contactor. This safety feature assures that the annealer will not overheat even if the temperature controller or the power relay fails in the “on” position. The **door-interlock disconnect switch [L]** is located on the side of the control panel and disconnects power if the panel door is opened.





Watlow **PM** (panel mount) controller. Available as 1/32th, 1/16th, 1/8th or 1/4 DIN sizes. This controller stores up to 4 profiles of 10 steps each. The standard model can communicate with the RUI.



Options: Integrated Over Temp Limit Controller, add \$220.00

Model #	Price
PM .....	\$256.00-312.00

Watlow **RM** (rail mount) controller mounts on a DIN rail inside the control panel enclosure. This controller stores up to 10 profiles of 10 steps each and requires an RUI (one RUI for up to 16 RM controllers). RMs can be configured for power sharing, multi-zone control, and sensor averaging—ideal for furnaces, large fusing, slumping casting, or annealing ovens. It can be set up with up to 4 inputs and 8 outputs.



Please call for assistance.

Model #	Price
RM.....	\$651.00

Watlow **RUI** (Remote User Interface) accesses up to 16 PM and/or RM controllers remotely.



Option: Purchase EZ Builder 5000 for Internet Access and Control! (see below)

Model #	Price
RUI .....	\$240.00

The **Watlow Series SD6L** is a 1/16 DIN limit controller. It is used as a redundant controller to prevent overheating due to failure of the temperature controller or controlling relay or actuator motor. These controllers feature dual display, a universal thermocouple input and mechanical relay output. On gas furnaces they are wired in series with gas and air pressure switches, and on electric ovens they are wired in series with the door limit switches to open a dedicated contactor.

Model #	Price
SD6L.....	\$210.00

**HMI** As an additional ease of use option to your new Wet Dog Glass studio we have developed a UL listed touch screen HMI enclosure that communicates with Watlow EZ-Zone controllers. We can configure a graphical touch screen control panel for your studio which can be used with electric & combustion furnaces, glory holes, and ovens.

When connected to your studios' network, this interface can be accessed with a VNC (virtual network controller) from your home PC or smart phone by downloading a free application from Watlow. This system requires the assistance of your hired electrician to supply power to the HMI enclosure and communication connectivity (Cat5e Ethernet cable) to each piece of equipment.



Model #	Price
HMI7" .....	\$3,985.00
HMI10" .....	\$4,660.00

**EZ Builder 5000** Configured Software (PCs only) enables ethernet connectivity through an HMI or remote studio access through an RUI via the internet. \$300 for first remotely accessed controller and \$100 for each additional remotely accessed controller.

Model #	Price
EZ Builder 5000.....	\$300.00

**Watlow Din-A-Mite SCRs** that are touch-safe, easy to install, and feature built in heat sinks. We rate the amperage at 122°F because that is the most common high temperature we find in panels mounted on the sides of kilns.

**Style C Din-A-Mites** are 3 pole relays that can switch either one leg up to 75 amps at 122°F for single phase applications or two legs up to 65 amps at 122°F for 3 phase applications. The Style C is fan cooled and is configured to receive a 4-20 mA input signal from the temperature controller. Please call for proper fuses and fuse holders for your application.



Model #	Price
Style C One Leg .....	\$298.00
Style C Two Leg .....	\$335.00

**Style D Din-A-Mites** are single pole relays that can switch up to 80 amps at 122°F and feature built in fuses. They can switch up to 100 amps at 86°F.



Model #	Price
Style D .....	\$390.00



### Furnaces

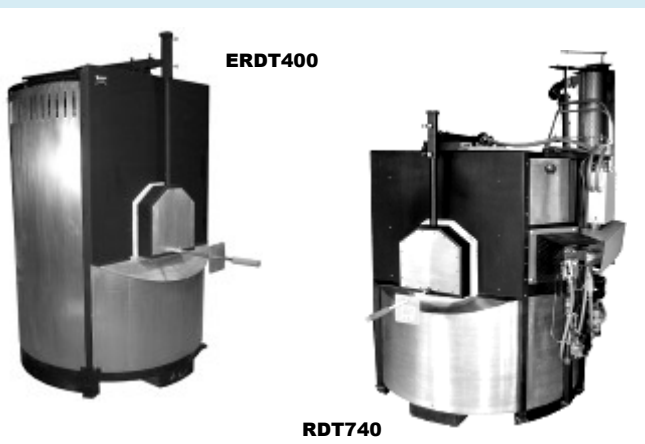
The furnace is the appliance in a hot glass studio that holds the molten glass that will be gathered or ladled out to make glass products. That said, there are very few hot glass studios that operate without a furnace. Ideally the furnace is large enough to supply 3-4 days worth of glass before refilling or "charging." A complete gas powered furnace includes a safety package, a combustion package, and a temperature control package. We size our combustion packages to provide power when you want it, and a quiet, idling burner at low fire. Eclipse, Inc's Thermjet burner is a fantastic performer for this application. A well-tuned Thermjet with modern temperature and gas-air ratio control components can save over 30% of gas costs when compared to older control methods. A heat recovery recuperator is now standard on all our gas furnaces (up to 28% reduction in fuel use). See page 11 for combustion, safety, and temperature control package selection. Please call about Continuous Melt or Custom Furnaces.

#### Round Day Tank Furnaces, Gas or Electric

Our Round Day Tank has a press bonded AZS liner in the form of a seamless flat-bottom crucible. With the round model, we expect equal or better lifespan and 39% reduction in heat loss. Clients are reporting higher glass quality as well, which can be attributed to a decrease in combustion volume and the lack of corners in the tank liner. These furnaces offer space saving compact design and air tightness to prevent heat loss.

#### Features Include

- Efficient fuel consumption
- Refractory profile reduces thermal bridging
- Integral skid facilitates handling
- Laser-cut accuracy provides for sure-fitting replacement parts
- Integral air gap behind outer skin increases safety and efficiency
- New user friendly, adjustable door design



#### Gas

Prices on gas fired furnaces do not include combustion, safety or control systems. See page 11.

Model #	Preferred Burner	Price
RDT400	..... 250KBTU/hr Thermjet	..... \$26,000.00
RDT560	..... 400KBTU/hr Thermjet	..... \$27,000.00
RDT740	..... 500KBTU/hr Thermjet	..... \$29,000.00
RDT1000	... 750KBTU/hr Thermjet	..... \$34,000.00

#### Electric

Prices include transformer, UL listed temperature control panel, all heating elements plus 2 spare and spare connecting hardware.

Model #	Price
ERDT400	..... \$37,950.00
ERDT560	..... \$38,950.00

# FURNACES

#### Free-Standing Pot Furnaces, Gas or Electric

Wet Dog Glass offers free standing pot furnaces in either gas or electric configurations. These furnaces feature a dense refractory lining backed by ceramic fiber insulation to create a very durable, energy efficient unit that produces high quality. The crucible is changed through the front of the furnace. In the case of the electric furnace, the elements do not need to be completely removed to change the crucible. The crucible is not included. Call us for further details on pricing.

#### Gas

Prices on gas fired furnaces do not include combustion, safety or control systems. See page 11.

Model #	Preferred Burner	*Est. Price	Crucible Models
FSP80	..... 150KBTU/hr Thermjet	..... \$10,000.00	..... Fits Emhart GC-198
FSP135	..... 250KBTU/hr Thermjet	..... \$12,500.00	..... Fits Emhart GC-93, GC-165 & GC-167
FSP275	..... 250KBTU/hr Thermjet	..... \$17,500.00	..... Fits Emhart GC-95
FSP400	..... 250KBTU/hr Thermjet	..... \$19,900.00	..... Fits Emhart GC-98
FSP600	..... 250KBTU/hr Thermjet	..... \$26,500.00	..... Fits Engineered Ceramics HT-FC0034

#### Electric

Prices do not include elements or transformer. Please call for further details.

Model #	*Est. Price	Crucible Models
EFSP80	..... \$11,500.00	..... Fits Emhart GC-198
EFSP135	..... \$12,500.00	..... Fits Emhart GC-93, GC-165 & GC167
EFSP275	..... \$17,500.00	..... Fits Emhart GC-95
EFSP400	..... \$19,900.00	..... Fits Emhart GC-98
EFSP600	..... \$26,500.00	..... Fits Engineered Ceramics HT-FC0034

\*Our Free Standing Pot Furnace Line is currently being redesigned to provide more efficient fuel consumption.



Custom FSPD140

Free standing double pot furnace. Designed with easy crucible accessibility and changeability in mind. Microporous insulation allows for compact design/smaller footprint. New fully adjustable door system now standard on all furnaces.



FURNACE PACKAGES

VSB Furnace Combustion / Safety Packages

Our VSB (variable speed blower) furnace combustion / safety packages meet or exceed NFPA 86 Standard for Ovens and Furnaces. These packages are designed to be used with Wet Dog Glass Furnace Control Panels (see below). Included in the packages are a Thermjet burner with PCA nozzles (stainless) for use with preheated air, spark plug, ALO, butterfly valve, proportionator, regulator, UV scanner, gas and air pressure switches, dual safety shutoff valves with flanges, visual position indicators, an ignition transformer, a high limit switch, a CPI 400, pilot gas solenoid and adjustable orifice gas cock. These components come assembled and installed on the equipment. The benefits of using a variable speed blower compared to a constant speed blower are that the variable speed blower only uses

Package Model #	Burner Size	Price
VSB-CSP025 .....	TJ025 .....	\$6,622.00
VSB-CSP040 .....	TJ040 .....	\$7,592.00
VSB-CSP050 .....	TJ050 .....	\$7,817.00
VSB-CSP075 .....	TJ075 .....	\$7,922.00
VSB-CSP100 .....	TJ100 .....	\$9,526.00

enough electricity to keep the furnace at operating temperature, and the cost is made up by the absence of the automatic butterfly valve or constant speed blower. Call us for pricing on packages that include Thermjets with cast iron nozzle. Use of these packages requires two Type R thermocouples, sold separately, price on request. The chart to the left lists packages based on burner size.

\*ABV Furnace Combustion / Safety Packages are still available. Please call or email us for details and pricing.



Recuperator

Our insulated stainless steel recuperator uses furnace exhaust gases to preheat combustion air up to 650°F, reducing fuel consumption up to 36%.

Use with Eclipse

Model	Thermjet Model #	Price
R1525.....	TJ015PCA, TJ025PCA....	\$1,525.00
R4050.....	TJ040PCA, TJ050PCA....	\$1,600.00
R75100.....	TJ075PCA, TJ100PCA....	\$1,775.00
R15000.....	TJ150PCA .....	\$2,250.00

Furnace Temperature Control Panels

All furnace control panels are UL508A listed type 1 industrial control panels. Flame models as a standard are mounted directly to each piece of equipment with three mounting location options (please contact us to specify location). Electric models ship on a pallet with mounting instructions. All Wet Dog Glass, LLC furnace control panels are equipped with simplified connections to a building security alarm system or phone dialer (please contact us to purchase your phone dialer). Wet Dog Glass, LLC is devoted to compliance, safety and ease of use. Our control panels are accompanied by compliance labels, owner's manual and detailed electrical schematics.



CPF-ULFURN



Flame Control Panel Models

Our standard furnace control panel has an off/on switch, three LED lights for flame status (interlocks closed, trial for ignition & flame failure), a reset button for the Eclipse Veri-Flame safety system, and a Watlow EZ-Zone RM temperature controller with integrated over-temp control & second loop of control for optional automated flue damper systems.

Model #	Price
CPF-UL RM .....	\$3,192.00
CPF-UL RM Damper .....	\$3,275.00

Wall Mounted Furnace Control Panel Option

Because we understand that every customer has a unique space and access requirements for their control panels, we have an option that allows you to mount the control panel to the wall. A junction panel mounted onto the furnace connects to your furnace control panel installed elsewhere in the room. We recommend that you mount the furnace control panel within 150 feet of wire travel from the furnace. **Model #** FURN-JBOX.....\$545.00

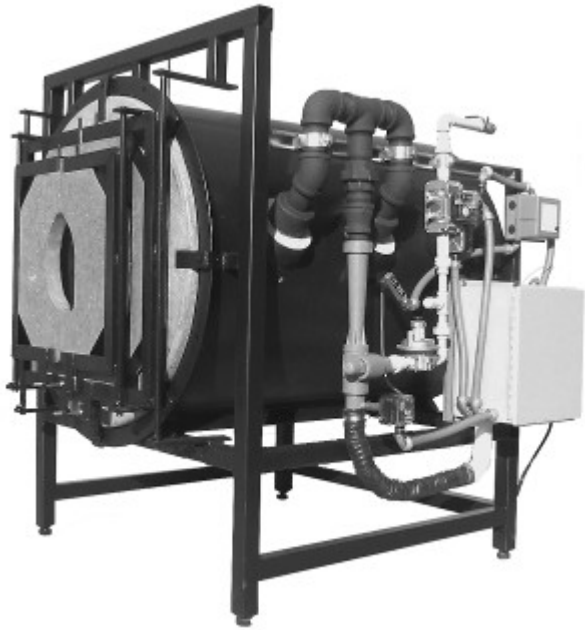
Electric Control Panel Models

Our standard electric furnace control panel is designed for use with molybdenum disilicide heating elements. While Wet Dog Glass, LLC does not currently offer a SiC heating element furnace we do make a control panel for you do-it-yourselfers.

These temperature control panels have an off/on switch, LED indicator, key activated silence for furnace audible alarms, a Watlow EZ-Zone PM temperature controller with integrated over-temp control, Watlow DIN-A-MITE D and an A/C unit to keep power switching device at a safe operating temperatures.

Model #	Price
CPE-UL-FURN-MoSi .....	\$9,177.00
CPE-UL-FURN-SiC .....	\$5,698.00





**Glory Holes**

As a professional glass artist, your interests lie in making art. Our glory holes are designed with ease of operation and maintenance in mind. The result is a very efficient, durable machine that will give you years of service. For ease and safety in igniting the burners, we drill a 1/2" pilot hole under the main burner. Heat retention rings are made in four pieces. The lining is 2800F insulated fire bricks, staggered and mortared for structure, and the 2" ceramic fiber backup insulation is packed dry to give high insulating value.

Our glory holes are approximately 1.6 times as deep as their inside diameter, which provides an ideal heat range throughout the glory hole and gives lots of room for tall pieces and deep reheats. The center height is adjustable from 34" to 36" – the most ergonomic height range for lifting and turning. Our unique round burners are as quiet as ribbon burners and are included in the price of the glory hole.

A glory holes' ideal size is about 2" larger than the diameter of the largest piece of glass that will be made in the glory hole. Consider our double ended glory hole if you know you'll have a constant need for two glory holes, as the initial cost is much less than two separate glory holes. See our website for recuperated glory holes.

**Options:**

- \* Gas booster pedal for on/off reduction atmosphere, \$536.00
- \* Casters, \$180.00 - \$420.00
- \* Door molds, \$475.00 - \$600.00
- \* Spare set of doors frames available for recasting with no downtime, \$250.00 - \$1400.00.

Model #	Opening Dia.	Interior Dia.	Inside Length	BTU's	Price
GH9	9"	11"dia	20"	75K/hr	\$4,835.00
GH12	12"	14"dia	24.5"	145K/hr	\$5,900.00
GH15/16	15"	19"dia	29.5"	250K/hr	\$6,995.00
GH18	18"	22"dia	38.5"	300K/hr	\$7,795.00
GH21	21"	25"dia	38.5"	350K/hr	\$8,515.00
GH24	24"	29"dia	46"	475k/hr	\$9,295.00
GH27	27"	33"dia	46"	600K/hr	\$9,995.00
GH30	30"	36"dia	50.5"	750K/hr	\$11,395.00
GH33	33"	39"dia	50.5"	950K/hr	\$13,195.00
GH15DE	15"	19"dia	40"	300K/hr	\$7,995.00

**Glory Hole Combustion, Safety and Temperature Control Packages**

The Constant-Speed Blower packages (CSB) include a mixer, zero governor, ball valve and butterfly valve, and uses air from your existing fixed speed all-studio blower.

CSB Model #	Price	VSB Model #	Price
CGH9	\$1,206.00	CGH9VSB	\$4,166.00
CGH12	\$1,206.00	CGH12VSB	\$4,345.00
CGH15/16	\$1,535.00	CGH15/16VSB	\$4,838.00
CGH18	\$1,535.00	CGH18VSB	\$4,838.00
CGH21	\$1,732.00	CGH21VSB	\$5,259.00
CGH24	\$1,761.00	CGH24VSB	\$5,704.00
CGH27	\$1,770.00	CGH27VSB	\$5,704.00
CGH30	\$3,066.00		call for pricing
CGH33	\$3,066.00		call for pricing

\*These packages can be ordered as components or assembled with plumbing for existing glory holes.

Our energy-saving Variable-Speed Blower Packages (VSB) include a mixer, zero governor, ball valve, an enclosed blower (for larger models blower is not enclosed), a UL listed control panel with connections to the Eclipse Veriflame (see Safety Packages below), blower, a Watlow EZ-Zone PM controller with optional automatic temperature control.

Packages with automatic temperature control require a Type R thermocouple, not included. Please call us for current pricing on thermocouples.

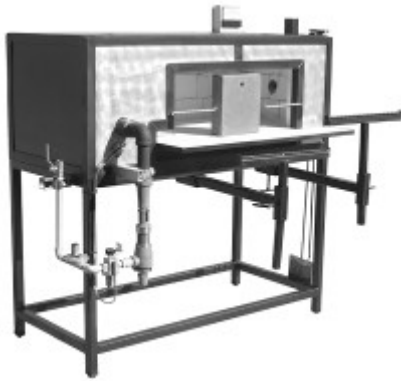
All necessary plumbing and hardware is assembled and installed prior to shipping when ordered with a glory hole.

**Glory Hole NFPA 86 Safety Packages**

Designed to be NFPA 86 compliant. Our NFPA 86 packages include a uv scanner, an Eclipse Veriflame, gas and air dual safety shutoff switches and a CPI400 for models GH24 and larger. Consult with your local gas inspector for help

Model #	Prices
86SGH15/16 thru 86SGH21	\$2,703.00
86SGH27 thru 86SGH33	\$2,935.00

GLORY HOLES



**GA1**

**Garage**

For anyone making glass pieces with several components, a garage keeps parts warm and ready for assembly. Our garage has an opening measuring 10" tall by 22.5" wide to permit the making of goblets, heating color bar and heating powder drawings on wide plates. It can also be used for a wider range of processes including crude annealing, slumping and fusing. This unit is well insulated and has a flame path that enables stable heat distribution with higher temperatures towards the left side. Our safety package includes a flame sensor with automatic shutoff in the event of flame failure.

**Interior**

Model #	Dimensions	BTU/hr	Price
GA1	13.5"h x 17"d x 35.5"w	62,000	\$4,160.00
GA2	18"h x 22"d x 49"w	90,000	\$6,646.00

**Garage Combustion Packages**

For use with either natural gas or propane, these packages include an injector, a sticktite nozzle, a ball valve and all the necessary plumbing and hardware, assembled and installed.

**Low Pressure Natural Gas or Propane**

Model #	Injector Type	Price
CLNGGA1	Single Stage	\$670.00
CLPGA1	Compound	\$736.00
CLNGGA2	Single Stage	\$693.00
CLPGA2	Compound	\$830.00

**High Pressure Propane**

Model #	Injector Type	Price
CHPGA1	Compound	\$587.00
CHPGA2	Compound	\$634.00

**Garage Safety Package**

This safety package includes a regulator, a pilot gas safety valve, a pilot burner, a Type K thermocouple, and all the necessary plumbing and hardware assembled and installed.

Model #	Price
SGA	\$440.00

**Garage Temperature Indication Package**

Includes a Type K thermocouple and an analog pyrometer, assembled and installed. \$240.00



**PW20**

**Pipe Warmer**

A pipe warmer heats the tips of the pipes and punties so that molten glass will stick to them when gathering. It can also be used to keep small glass parts, such as lip wraps, warm while still on the end of a punty rod. The pipe warmer can generally support 2 – 3 stations.

Model #	Opening	BTU/hr	Price
PW20	20"	25,000	\$2,021.00
PW29	29"	40,000	\$2,856.00

**Pipe Warmer Combustion Packages**

These combustion packages are for either natural gas or propane. They include an injector, a sticktite nozzle, a ball valve, and all the necessary plumbing and hardware installed.

Model #	Injector Type	Price
CNGPW20	Single Stage	\$607.00
CPPW20	Compound	\$669.00
CNGPW29	Single Stage	\$647.00
CPPW29	Compound	\$793.00

**Pipe Warmer Safety Package**

Included in this package are a pilot gas safety valve, a pilot burner, a Type K thermocouple, and all the necessary plumbing and hardware assembled and installed on equipment.

Model #	Price
SPW	\$440.00

**Combo Units**

A space saver, these units take into account accessibility and heat recovery. Price on the PW20/CF1.6 includes a stainless steel oven rack that holds 24 color bars. Customizations available

Combustion, safety and oven controls not included. See above for combustion and safety, see page 15 for color oven controls.

Model #	Price
PW20/CF1.6	\$4,350.00
PW29/CF1.6	\$4,750.00
PW15.5/GA1	\$5,465.00



**PW29/CF1.6**



Front Loading Annealer



Top Loading Casting Kiln



Top Loading Color Oven

**Annealers / Casting Kilns**

Our annealing ovens and casting kilns come in two styles – front loading and top loading. Front loading ovens and kilns are popular for their ability to be more spatially efficient, because it is easy to stack shelves inside and to stack one oven on top of another. Top loaders annealers are best used for operations where the user knocks a piece off the pipe or punty directly into the oven, allowing a single person to operate. Top loaders also lend themselves to kiln casting because it is easier to charge molds from the top than the front. For casting kilns we use stainless steel in the lip around the opening, build a 100% fiber blanket lid with ceramic shell hot face, and provide more power to reach higher temperatures quickly.

Color ovens are designed for keeping color bars hot, but may also be used for heating graal cups or other items that can be picked up hot. Color ovens are available as front or top loaders.

All of our ovens are lined with insulating firebrick that is backed by ceramic fiberboard making them efficient, durable components of your studio. In all of our ovens, elements are recessed into slots that are cut into the brick wall, and door limit switches de-energize heating elements when doors are open to protect the user from any electrical hazard. Two type K thermocouples are included. Levelers are standard on all ovens and kilns.

See page 15 for Wet Dog Glass control panels with Watlow controllers.

**Options**

**Shelves** A popular option for our front loaders is our modular rack system. The shelves and center column can be removed and rearranged to accommodate a variety of product sizes. Racks for casting kilns are stainless. Contact us for pricing.



Model #	Price
AF16.1R .....	\$600.00
AF24.2R .....	\$720.00
AF28.3R .....	\$790.00

**Casters** with brakes are available.

ANNEALERS

Model #	Interior Dimensions	Power	Doors	Price
<b>Front Loader Annealers</b> (Also available as Casting Kilns, contact us for details)				
AF16.1 .....	35.5" w x 29" d x 27" h .....	11.52 kw .....	2-hinged .....	\$7,700.00
AF24.2 .....	53.5" w x 29" d x 27" h .....	16.60 kw .....	2-hinged .....	\$8,550.00
AF28.3 .....	53.5" w x 29" d x 31.5" h .....	16.60 kw .....	2-hinged .....	\$9,150.00
<b>Top Loader Annealers</b>				
AT11.4 .....	35.5" w x 26.5" d x 21" h .....	11.52 kw .....	1-counterweighted .....	\$5,755.00
AT17.4 .....	44.5" w x 26.5" d x 25.5" h .....	11.52 kw .....	1-counterweighted .....	\$6,720.00
AT20.9 .....	53.5" w x 26.5" d x 25.5" h .....	16.60 kw .....	1-counterweighted .....	\$7,450.00
AT24.4 .....	62.5" w x 26.5" d x 25.5" h .....	16.60 kw .....	1-counterweighted .....	\$8,180.00
<b>Top Load Casting Kilns</b>				
CKT11.4 .....	35.5" w x 26.5" d x 21" h .....	14.40 kw .....	1-counterweighted .....	\$7,650.00
CKT17.4 .....	44.5" w x 26.5" d x 25.5" h .....	14.40 kw .....	1-counterweighted .....	\$8,825.00
CKT20.9 .....	53.5" w x 26.5" d x 25.5" h .....	20.75 kw .....	1-counterweighted .....	\$9,900.00
CKT24.4 .....	62.5" w x 26.5" d x 25.5" h .....	20.75 kw .....	1-counterweighted .....	\$10,575.00
<b>Color Ovens</b>				
CF1.6 .....	18" w x 12" d x 13.5" h .....	13A@240VAC .....	1 hinged, front .....	\$1,875.00
CT1.6 .....	17.5" w x 13.5" d x 12" h .....	12A@240VAC .....	1 hinged, top .....	\$1,875.00



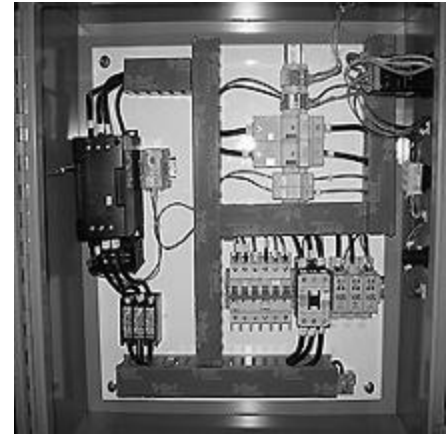
**WET DOG GLASS**

# ANNEALER CONTROL

15



**Annealer control panel with side-mounted controls**



**Interior**

**Annealer and Casting Kiln Control Panels** Our standard electric heater control panel for ovens has an off/on switch, a controller enabled LED, Watlow EZ-Zone PM temperature controller with integrated over-temp control, Watlow DIN-A-MITE C SCR for proportional control to your heating elements. Our integrated over-temp system includes a secondary thermocouple and is set to close a definite purpose contactor (shuts off all power to heating elements) if the oven exceeds maximum temperature or the door(s) are opened. Our electric heater control panels are mounted directly to each piece of equipment. For remote mounting please contact us.

<b>Model #</b>	<b>Price</b>
CPE-UL-OVEN.....	\$3,075.00

For customers using external controllers (Digitry) with mechanical relay outputs we have an electric heater control panel for ovens with an over-temperature safety system installed. The electric heater control panel includes an off/on switch, a controller enabled LED, Watlow EZ-Zone PML limit controller for over-temp control, mercury displacement relay for on/off control to your heating elements.

<b>Model #</b>	<b>Price</b>
CPE-UL-LIMIT-MDR.....	\$3,075.00

For customers using external controllers (Digitry) with proportional control outputs we have an electric heater control panel for ovens with an over-temperature safety system installed. The electric heater control panel includes an off/on switch, a controller enabled LED, Watlow EZ-Zone PML limit controller for over-temp control, Watlow DIN-A-MITE C SCR for proportional control to your heating elements.

<b>Model #</b>	<b>Price</b>
CPE-UL-LIMIT-SCR .....	\$3,075.00

Panels are available for use with 120V, 208V, 240V and 480V. Single and three phase power may be supported. Please specify amperage and voltage when ordering. All control panels are UL listed. Please call for pricing on custom panels.

**Color oven control panels** are similar to the annealer panels, including the optional over-temperature protection. The controls are usually mounted on the top of the panel for easy access and visibility. For top-loading color boxes, a door limit switch is mounted to the top of the enclosure. This switch interrupts power to the elements when the color oven lid is opened, preventing any possible user contact with energized elements.

Controls may be mounted on side (as shown) or in the lid of the panel. Please specify amperage and voltage when ordering. All control panels are UL listed. Please call for pricing on custom panels.

<b>Model #</b>	<b>Price</b>
CPE-UL-CB .....	\$1,750.00





**Standard Benches**

- \* Separate tool shelf for variety in station arrangement
- \* Curved right side rail support for comfort and reach
- \* Double walled heat shields
- \* Optional metal top on tool table (please specify)

**Optional leather padded seat**

Model #	Price
BSTAN .....	\$1,650.00
BSTAN Leather .....	\$1,950.00



**Marvers**

- \* 3/4" steel plate, Blanchard ground
- \* Swivel casters with brakes

Model #	Dimensions	Price
M2030 .....	20" X 30" Top .....	\$1,155.00
M2436 .....	24" X 36" Top .....	\$1,255.00

**Rolling Yokes & Tracks**

- \* Adjustable height
- \* Swivel-head yoke with bearings for smooth pipe rotation.

Model #	Price
SY .....	\$350.00
RY1 .....	\$575.00
RY2 .....	\$635.00
Tracks (5ft) .....	\$95.00

(longer tracks available upon request)



**Powder Box**

- \* Adjustable yoke
- \* HEPA filter
- \* Foot pedal activation switch
- \* Swivel casters with brakes
- \* 120VAC, 5amps



Two sizes available-  
24" wide opening and  
35" wide opening.

Model #	Price
PBX2 .....	\$2,350.00
PBX3 .....	\$2,850.00

**Knock-Off Tables**

- \* 4 square feet of high temperature fabric
- \* Telescoping yoke
- \* Water cup holder
- \* Shelf for gloves and other accessories



Model #	Price
Knock-off Table .....	\$725.00

**Pipe-Coolers**

Ideal for institutions because there is no power cord. Use deep cycle marine battery, not included.



Model #	Price
PCDC .....	\$2,350.00



**Rakes**

Have bubbles from gathering? Use our rake to skim the surface of the glass and push bubbles to the back of the furnace so they don't end up in your work. This rake is 9" wide stainless steel with 60" long mild steel handle.

Model #	Price
RK960.....	\$105.00



**Ladles**

43" handle. Double-thick collar is triple pass welded to ladle cup for unsurpassed durability.

Model #	Price
L4..... 4" ...	\$165.00
L6..... 6" ...	\$175.00
L8..... 8" ...	\$185.00
L10..... 10" ...	\$195.00



**Crack-off Barrels**

Keep your eyes safe. Crack-off barrel reduces glass fragments flying through the air in your studio. Drawer at bottom is removable for easy cleaning. Use one for color crack-offs and one for clear.



Model #	Price
Crack off Barrel.....	\$795.00

**Pipe Racks**

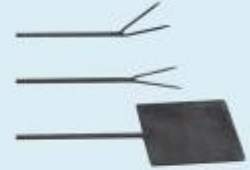
Available in 24", 48" and 72" widths. Steel rods divide the width into 8" sections to help organize pipes and punties. The separate trough has a handle and casters to aid in rolling to a refuse container.



Model #	Price
PR24" .....	\$795.00
PR48" .....	\$995.00
PR72" .....	\$1,195.00

**Garage Tools**

Steel tools aid moving glass into and out of a garage. Handles are 39" long. The pastorelli is 5" x 7".



Model #	Price
GT1 Straight Fork....	\$69.00
GT2 Bent-Fork .....	\$69.00
GT3 Pastorelli .....	\$89.00

**Heat Shields**

Two layer construction of steel and aluminum with air-space between layers to shield you from heat. Shade 5 glass view slides into position or can be moved out of viewing area.



Model #	Price
HS1.....	\$860.00
HS2 .....	\$895.00

**Charging Chute**

Minimize heat loss and charging mess with a charging chute. It holds up to 50lbs of batch. Fill the chute, open the furnace door, charge, close the door – Done!



Model #	Price
Charging Chute.....	\$165.00

**Torch Holders**

3 swiveling casters and adjustable torch holder height. Heavy steel base prevents tipping. LP gas tank and torch not included.



Model #	Price
Torch Holder.....	\$460.00



**FW24VSR** 24" Diamond flatwheel. Our newly designed flatwheel features a 1HP variable speed, reversible motor, stainless steel leveling feet and water basin and a PVC splashguard (not shown). Also includes water feed assembly and drain hose. Accepts 24" magnetic diamond discs with 1" arbor. Requires 120 VAC single phase. Magnetic discs not included.

Model #	Price
FW24VSR.....	\$5,700.00



The Jim9000 is designed by cold workers for cold workers. The spindle features a Morris 3 Taper and is adjustable from 60 to 30 inches giving the ability to stand or use a stool or low chair to reduce fatigue on the body. It has a Marathon Blue Max 2HP Motor and Yaskawa V74X Drive. The RPM is adjustable from 400 - 3000.

Model #	Price
Jim9000.....	\$7,800.00



**Husqvarna Portasaw & Guardmatic** High-capacity masonry saws. These water-fed saws have a heavy-duty frame and a durable conveyor cart with a rubber top to place your glass on. Cutting blade not included.

Model #	Motor Size	Blade Capacity	Price
MS355 .....	1.5HP	14"	\$1,813.00
Stand for TS355..			\$154.00
MS510 .....	5HP	20"	\$3,649.00



**PC48x36/DP850-PC** Sandblasting cabinet. A versatile cabinet with large doors. Includes inline water filter, pressure regulator and gauge, gloves, safety enclosed foot pedal, tungsten carbide nozzle, 850 CFM abrasive separator and 30 bag dust collector. Inside dimensions are 48" wide x 36" deep x 36" high. Full size doors openings are 28" x 30". Dust collector requires 120VAC. Requires 5HP air compressor, not included.

Model #	Price
PC28x36/DP850-PC .....	\$5,138.00

