Suggested Specification
For
Model CG10, CG10A & CG10B
Beckett Gas Burners

R.W. Beckett Corporation

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General Burner Description:

Install _____ Beckett Model _____ Gas Burner forced draft flame retention power gas burners. Burners shall be capable of burning _____BTUs (natural gas or propane) with a specific gravity of ____(0.64 or 1.56). Gas Pressure supplied to the burner gas train connection shall be a minimum of _____ inches W.C. (PSIG) at full high rate and a maximum of _____ inches W.C. at static conditions.

Each burner shall be listed by Underwriters Laboratories and shall bear the appropriate UL label. In addition to the UL requirements, all equipment and installation procedures will meet the requirements of CSD-1 (FM, Swiss RE). Each burner shall be designed and constructed as an integrated combustion system package.

Burner Construction:

Burner housing shall be of cast aluminum construction. The burner mounting flange must support the burner weight on the appliance independent of any support and shall be seal welded to the air tube. Burners shall be furnished with a stainless steel flame retention head, capable of withstanding temperatures up to 1400 degrees F. The combustion head assembly shall incorporate an air diffuser, gas spuds downstream of air diffuser and direct ignition electrodes. The combustion gun assembly shall be removable and have the ability to be set or replaced. Full access to the burner combustion gun assembly shall be available without removing the burner chassis from the appliance. Air required for combustion shall be supplied by a blower, mounted integral to the burner. The blower wheel shall be of a forward curved "squirrel Cage" design and shall be directly driven by a 1/3HP, 3450rpm, _____volt, 60Hertz, ____Phase motor. The burner shall be equipped with an SPDT differential air pressure switch interlocked and continuously monitored to prevent burner operation if there is insufficient combustion air.

Ignition:

The burner ignition system shall directly ignite the natural gas or propane fuel. The ignition spark shall be generated by a 6000 volt electronic igniter, and directed by porcelain insulated electrodes located on the combustion head assembly. Ignition shall occur only at a reduced firing rate, and only after the flame is proven shall full rate be actuated.

Burner Control Panel:

All control components shall be mounted and wired in a remote 12 x 16 panel. The panel shall incorporate an Easy Access cover and Power On and Fuel On indicating lights. All wiring for remote panel electrical components shall be factory pre-wired to a terminal strip within the control panel. A junction box pre-wired to the burner components shall be mounted on the burner. It shall have a terminal strip, which will match a terminal strip in the remote panel. Field wiring will be required between the burner mounted junction box and the remote control panel.

Gas Train:

The gas train shall consist of a manual shutoff cock, redundant gas valve and regulating gas valve. The gas train shall meet UL and CSD-1 requirements and include a manual reset low gas pressure switch and manual reset high gas pressure switch.

Mode of Operation:

On-Off with low fire start- The main gas supply shall be controlled by a diaphragm regulating gas valve. The air inlet control band and shutter shall be fixed at the optimum fuel/air ratio at the high fire position.

Product Liability Insurance:

The burner manufacturer will provide an insurance certificate documenting his current coverage of Product Liability Insurance with minimum coverage of $10,000,000.

Burner Start up Information and Test Data:

On completion of the burner system start up- the installing contractor will complete the attached “Burner Start Up and Test Data” form and deliver to the Specifying Engineer.

Burner Start Up Information & Test Data

Beckett Model _____ **Serial Number**_____

Job Location_____

Start Up Date_____ **Company Name**_____ **Technician Name**_____

Type of Gas: NAT____ Propane____

Gas Pressure at Train Inlet
Burner off position _____w.c

Flame Signal Readings
Low Fire _____DC volts
High Fire _____DC volts

Draft @ Breech
High Fire_____w.c

Gas Pressure Train Inlet
Light-Off _____w.c
High Fire _____w.c

O2
Light-Off _____%
High Fire _____%

Net Stack Temperature
High Fire _____degrees

Gas Pressure at Burner
Light-Off _____w.c
High Fire _____w.c

CO
Light-Off _____%
High Fire _____%

Combustion Efficiency
High Fire _____%

Power Supply
Volts____ PH____ Hz____

Input Rate BTU/HR
High Fire_____

Air Damper Settings
Shutter_____
Band_____

Control Settings:

Operating Control Cut/Out
_____

Limit Control Cut/Out Setting
_____

Low/High Gas Pressure
_____/_____

Operating Control Cut/In Setting
_____

Limit control Cut/In Setting
_____

Checked for Proper Operation	YES	NO	Checked for Proper Operation	YES	NO
Low water cut off			Barometric Damper		
High water cut off			Boiler Room combustion air		
Flame Safeguard control ignition failure			All gas lines checked for leaks		
Flame Safeguard control main flame failure			Gas lines and controls properly vented		
Burner air flow switch			Other system components specify		

Notified_____ of the following system deficiencies_____
_____
_____
_____
_____