



Heat gen services

techniques for energy saving

INDUSTRIAL GAS BURNER



FEATURES

- FULLY AUTOMATIC
- ON/OFF OPERATION
- OPTIONAL HI-LO OPERATION WITH 2 SET POINT TEMP. CONTROLLER
- COMPACT DESIGN
- HIGHLY EFFICIENT
- EASY MAINTENANCE
- RUGGED DESIGN
- EASY ADAPTABILITY/INSTALLATION

APPLICATIONS

- FURNACES
- OVENS
- DRIERS
- HOT AIR GENERATOR
- POWDER COATING PLANT
- INCINERATORS
- CUSTOM MADE HEATING SYSTEMS

TECHNICAL SPECIFICATION

MODEL		HGB 30	HGB 60	HGB 80
1) THERMAL POWER	Kw Kcal/h	35 30,000	70 60,000	90 80,000
2) Min. Output	Kw	12	35	56
3) Fuel Option		LPG / NATURAL GAS AT 50 mbar		
4) ELECTRICAL SUPPLY 50 Hz	V	230 SINGLE PHASE	230 SINGLE PHASE	230 SINGLE PHASE
5) MOTOR POWER	Kw	0.18	0.18	0.25

UNIQUE FEATURES

FULLY AUTOMATIC OPERATION:- Simply turning on the switch will put the burner in operation. Intelligent burner controller performs all the parameter checks i.e. Flame detection, blower on, etc. In case of failure of any parameters puts the burner in lock out mode, switching off the gas supply and gives visual/audio alarm for operator attendance.



ON-OFF/HI-LO OPERATION:- Standard burner comes with on-off control which can be hooked up with automatic temperature controller thermostat. Specially developed HI-LO system for precise control over the set point (optional) which can be hooked up with Heat gen DTC 302 Temperature Controller (Optional) is supplied as per requirement of the customer.

COMPACT DESIGN: Designed to work in harsh industrial environment, with easy adaptability to most heating application. Burner and control panel are fitted separately to avoid damages to control section, ignition transformer, etc. Due to back heat.

HIGHLY EFFICIENT :- The burner comes with adjustable. Air and Gas flow control for complete combustion of fuel & to achieve tuning of burner to various applications resulting in high efficiency.

EASY MAINTAINANCE: Overall construction of burner permits an easy access to the burner components ensuring easy maintainance.

RUGGED CONSTRUCTION:- Critical components are manufactured with high grade of heat resistant stainless steel material to ensure high quality level and high working life. Burner controllers and other control components used are of high quality and, are housed in separate control panel for trouble free operation. Indigenous components avoid inventory of imported costly components which in turn reduces running cost.



SPARES & SERVICES:- Easy availability of spares & efficient before and after sales service by team of experienced and skilled personnel.

APPLICATION GUIDANCE:- Experienced and knowledgeable team of engineers to guide & assist in burner selection for customer application.

STD. BURNER PKG. INCLUDES

- Gas burner unit
- Solenoid Valve
- Control panel, with cable connectors
- Flow control valve
- 2nd stage gas regulator
- Operation & Instruction Manual

N.B.: Technical specifications, design may change without any prior notice, to incorporate latest developments, & to improve efficiency of the Burner.

SINGLE/THREE PHASE THYRISTER UNIT MODEL HG 2001 & HG 2003:

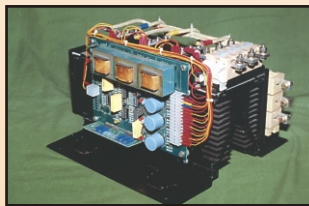
For better energy efficiency, accuracy, safety and control. HG 2003 is a fully synchronised, true three phase angle thyristor power controller for 3 wire or 4 wire resistive, transformer coupled resistive & inductive loads. The output through 3 pairs of SCR'S in inverse parallel mode gives synchronised full wave control over all the three phases. The drive accommodates all features like soft start, current limit and over current limit as a standard features. It is built to work in harsh industrial environment. It gives very smooth control at the set value of a PID Controller with zero shoot up and shoot down which saves at least 5 to 10% of energy. This unit is well suited for ovens, kilns, furnaces, plastic injection moulding machines and many more where smooth control at set value is required. As this unit is vigorously tested in our own Furnaces, it can be used blindly on any equipment.

MAIN FEATURES

- Advanced hybrid design incorporating logic and analog circuits
- Compact, robust construction with copper bus-bars.
- Bulkhead mounting for easy installation
- Self synchronizing
- Isolated heat sink, shrouded electronics meeting CE norms for added safety
- Phase angle control
- Field adjustable current limit and current trip
- Field adjustable soft start
- Semi-conductor fuse
- Line to load regulation
- High to load rated SCR's
- Standard models and customization (factory configured for your application)
- Configurable inputs
- Comprehensive operating, installation and trouble shooting manual
- Unbeatable price and delivery
- One year warranty

ADVANTAGES

- Smooth control of complex heaters such as Molybdenum di-silicide, Tungsten, silicon carbide, Quartz lamps, Infra-red heaters & all types of heating systems.
- Ovens, Kilns, autoclaves, furnaces, lighting etc.
- Considerable savings in electrical consumption..



As per the tests carried out at our Laboratory. It depends on different characteristics of furnace. We have a full setup to carry out the experiment on any furnace to work out the exact savings

Technical Specification:

Environment	
Storage Temperature	: -10°C to 60°C
Operating Temperature	: 10°C to 50°C
Inputs	
Control signal	: analog current :- 4 to 20ma : Analog Voltage :- 0 to 5 volts/0 to 10 Manual :- Through external 5K pot
Driver supply	: 110/208/220/240/415/440/Vac @ 50 / 60 Hz.
Firing Mode	
Output	: Phase Angle
Current ratings	: 25/50/75/100/125/150/200/250/300 Amps.
Load type	: Resistive/Inductive/capacitive
Soft start	: Adjustable soft start between 10 ms to 60sec
Current Limit	: Adjustable current limit between 10% and 100%
Regulation	: 3% output regulation with 12% supply variation.
Voltages	: 110/208/220/240/415/440 Vac @ 50/60 Hz.
Ambient Temperature	: Rated Capacity at 0 to 50°C derate by 10% for every 5°C rise Upto 60°C de-rate by 1% 100 Mts. (300 ft) above sea level. : Fan cooled, electrically isolated heat sink. : It fuse, adjustable soft-start, adjustable current limit.
Cooling Standard	

UNIVERSAL PROGRAM CONTROLLER DPC 302

UNIQUE STANDARD FEATURES

- Two Set Points
- Ramp / Soak Field Selectable
- Universal Input J/K/S/T/Pt 100
- Universal Output Relay / SSR / Analogue
- Proportional Output / On-Off
- HI & LO Alarm Relay Output
- 90 to 260 Volts SMPS based power supply
- Spike Protected
- Power Failure Protected
- Microprocessor Based
- Cycle Time Adjustable
- On-site Software calibration
- Duel Display
- Membrane Keypad
- Lacquered Glass Fibre PCBs with HAL
- Power on Watch Dog Timer
- 100% Indigenous and Serviceable



SPECIFICATIONS:

Accuracy	: ± 0.2% of full scale, ± 1 digit	Display	: Dual LED, 4-digit Red Process and set value display, 0.75"	
Set Point Resolution	: 1 Count / 0.1 Count	Power Consumption	: Less than 5VA @ 230 V AC.	
Repeatability	: ± 1 Count.	Weight Dimensions	: 68 H x 68 W x 12mm D.	
Cold junction comp.	: Available	Depth behind Panel	: 110 mm.	
Decimal Position	: Selectable	Operating Amb. Range	: 0 to 55°C, Humidity : 90% RH max, non condensing.	
Outputs		Reverse or direct acting Configurable from Menu	Memory Protection	: Solid State Non volatile Memory.
Mechanical Relay	: 10 Amps @ 240 volts AC.	Connections	: Screw terminals	
Output Current	: 0-20 mA, 4-20mA, 500 ohms Maximum	Contacts	: Twin bifurcated	
Output Voltage	: 20 VDC Pulse	Ramp Time	: 99 Hours 59 Minutes	
Alarms	: Optically isolated 5 Amps @ VDC Pulse	Soak Time	: 99 Hours 59 Minutes	
Power Supply	: 100 to 250 V AC, 50/60 Hz.			

PID PROGRAM CONTROLLER PPC 302

UNIQUE STANDARD FEATURES

- ONE SET POINT WITH ONE ALARM
- OUT PUT STANDARD
- CONTROL ACTION PID
- CYCLE TIME ADJUSTABLE
- RAMP/SOAK FIELD SELECTABLE
- UNIVERSAL INPUT J / K / R / S / T / Pt100
- UNIVERSAL OUTPUT RELAY / SSR / ANALOGUE
- DUEL DISPLAY
- HI& LO ALARM RELAY OUTPUT
- 100% INDIGENOUS AND SERVICEABLE
- MICROPROCESSOR BASED
- ON SITE SOFTWARE CALIBRATION
- MEMBRANE KEYPAD
- POWER FAILURE PROTECTED
- 90 TO 260 VOLTS SMPS BASED POWER SUPPLY
- SPIKE PROTECTED
- LACQUERED GLASS FIBER PCBs WITH HAL
- POWER ON WATCH DOG TIMER



Control		5 Amps @ 230 Vac.	
Proportional Band	: 0-200°C (0-360°F)	Power Supply	: 100 to 250 V AC
Reset (Integral)	: 0-3600 Seconds		: 50 / 60 Hz
Rate (derivative)	: 0-1000 Seconds	Display	: Dual LED, 4-digit
Ramp Rate	: 0-200°C / minute		: Red Process display,
Dwell	: (0-360° F)		: Green Menu
On / Off	: (0-3600 minutes)		: Parameter display,
	: With adjustable hysteresis	Power Consumption	: Less than 5 VA @
	: (0-20% of span)		: 230V AC
Cycle Time	: 0-120 Seconds	Dimensions	: 68 H x 68 W x 12 mm
Control Action	: Direct (for cooling and Reverse (for heating)	Depth behind Panel	: 110 mm
Set point Resolution	: 1 Count / 0.1 Count	Operating Amb. Range	: 0 to 55°C, Humidity,
Repeatability	: ± 1 Count		: 90% RH max,
Cold Junction comp.	: Available		: non-condensing
Decimal Position	: Selectable	Memory Protection	: Solid State Non
Mechanical Relay	: 10 Amps @ 240 Volts AC		: Volatile Memory
Output Current	: 0- 20 mA, 4-20 mA, 500 Ohms maximum.	Connections	: Screw terminals
Output Voltage	: 20 VDC Pulse	Contacts	: Twin bifurcated
Alarms	: Optically isolated		

SERVICES OFFERED:

- All types of furnace spares i.e. Heating elements, Thermocouples, special refractory shapes, insulation material, PI/PID Temperature Controllers.
- Energy saving-Thyrister Power Controllers
- Conversion & Revamping of Electrical Furnace to LPG /LNG Furnaces,
- Major Refractory & Insulation Lining of turnkey basis.
- Consultation on Energy saving Techniques in furnaces.
- Motion control - DC/AC drives, Stepper Motor Controller.
- Auxiliary equip-ments for Thermal spray Coating systems.
- Conversion of Electric Ovens, Furnaces, driers and Allied Heating Systems to LPG/CNG fired equipments.
- Conversion of Electric Motor driven compressor to CNG driven engine.



Heat gen services

Office : Opp. Nutan Nagar, Kanjurmarg (E) Mumbai-400 042. India.
Tel(022) : 25782674,25786744, fax :91-22-25779731
E-mail : sales@shikovi.com Website : www.shikovi.com
Fact : Opp. Khidkaleshwar Petrol Pump, Katal, Post-nilije, Tal-kalyan Dist. Thane 421/204 India
Telefax : 0251-5690936