C-B7

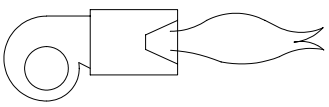
rev. 10/91

ICAM

TYPE PC

GAS BURNER

COMTHERM PACKAGE BURNER



THE PC BURNER

The 'PC' series of gas burners are pre-packaged fan assisted units designed to suit virtually all types of low temperature gas fired application; typical applications include the firing of box ovens, industrial dryers and air heaters.

The PC burners are widely used by many major plant manufacturers.

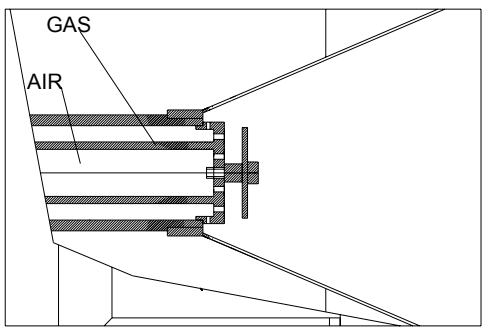
- **The design of the PC burners allow the plant designer complete flexibility in their application and they can be adapted for special physical arrangements.**

The 'PC' burners have been designed with ease of maintenance and installation a top priority, all parts of the burner including the nozzle and combustion tube can be removed without unbolting the burner off the mounting flange. An access panel on the burner casing allows easy access to the gas nozzle, spark plug and flame sensor.

A heat resistant peepsight is fitted in the casing of all burners allowing visual inspection of the flame during operation.

The nozzle mix design of the burner and the progressive air mixing feature of the combustion head ensure that burners can operate with high turn down capability; turndown ratios up to 40:1 are possible depending on burner applications and selection.

Sectional drawing of nozzle used on 'E' type burners- showing central primary air supply.



COMPLETE PREPACKAGED BURNERS

Each burner unit is supplied with a packaged and prepiped valve assembly, including the safety valves and controls necessary to form a fully pre-packaged combustion module.

All burners have an integral combustion air fan, air pressure switch, ignition spark plug and flame sensor; all the electrical components on the burner are prewired to a terminal enclosure mounted on the burner assembly.

The electrical terminal enclosure would normally be fitted with burner run and flame failure indication lights.

Burners are normally supplied complete with a gas valve assembly consisting of pilot/start valve assembly, safety shut off valves, pressure switches and governors; the exact type of valve assembly will depend on the application and the country of installation.

Burners are normally fitted with complete prewired automatic ignition and flame safety equipment.

Most types of flame failure and automatic ignition control units can be supplied; utilising either flame rectification or ultra-violet flame sensing equipment.

Burners can be supplied with extra large control consoles containing special control gear and switchgear to suit the requirements of any specific application; burners can be supplied with special valve arrangements; standard burners are supplied with right handed assemblies unless otherwise specified.

Fully prebuilt burner packages are fully tested and the operation of all components checked before despatch from the factory.

SPECIAL APPLICATIONS

As well as the standard range of PC burners, the burners can be tailored to meet customer specific requirements such as extended combustion tubes and continuous running burner fan applications.

Special versions of PC burners can be supplied without combustion air fan and pre-packaged controls for use with preheated combustion air and for applications involving the use of a single air fan for multiples of burners.

GAS SUPPLY

Series PC burners can be supplied for operation on natural or LP gases and are available in ten basic sizes, ranging from nominal thermal capacities of 70KW to 1760KW

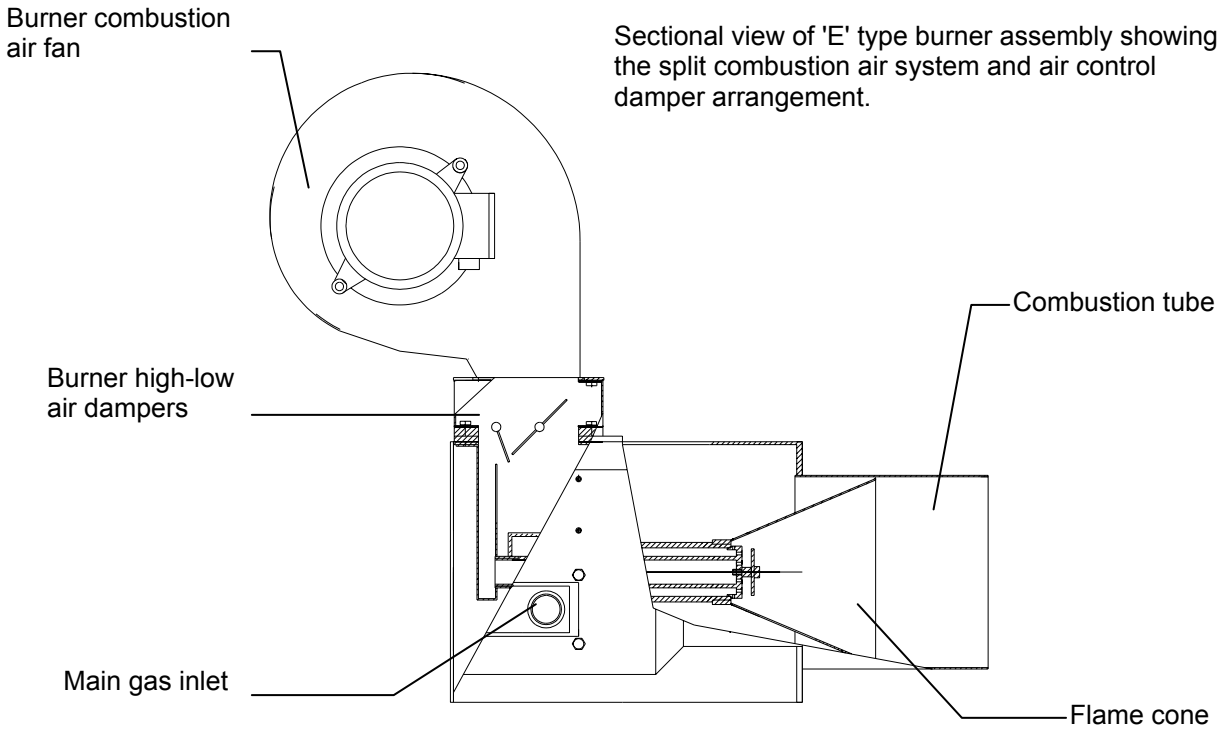
All valve assemblies on the burners are sized to suit an inlet gas pressure of 17.5 mbar (natural gas) or 30mbar (LP gases). Burners can be supplied to suit other gas types and supply pressures.

TYPES OF CONTROL AVAILABLE

Size PC0 is available only as on-off, high-low, or modulation(gas only) models.

Sizes PC1 - PC5 are available as high-low or full modulation (gas only) or (gas and air E type) models.

Sizes PC6-PC9 are only available as fully modulation (gas and air) E type models.



Sectional view of 'E' type burner assembly showing the split combustion air system and air control damper arrangement.

'E FOR ECONOMY

The type E range of PC burners (designated PC-E) have been designed specifically for applications where fuel economy can be obtained by restricting the combustion air volume whilst the burner is operating at low thermal inputs.

The burner uses a split combustion air supply as illustrated - this method of controlling the secondary air supply whilst keeping a constant primary air supply enables high turndown to be obtained whilst maintaining the good flame stability of the standard PC burners.

The E type burner is ideally suited to oven and drier applications where high volumes or recirculation air and small fresh air volumes are used.

ELECTRICAL SUPPLY

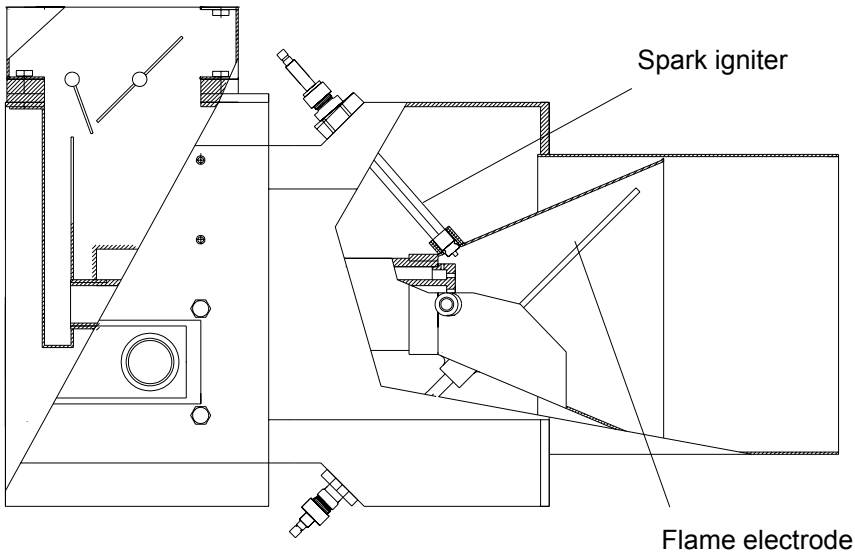
PC0 burners are supplied for single phase electrical supply only.

PC1-PC3 burners are available fitted with single phase or three phase fan motors.

PC4-PC9 burners are only supplied fitted with three phase T.E.F.C. motors.

Burners can be supplied to suit almost all types of electrical power supply; including 220/380/440v three phase (50 or 60Hz) power supply and with 110/120v or 220/240v control circuits. Burners to suit other electrical supply voltages can be supplied specially to suit a specific application requirement.

Illustration of external flame electrode and spark igniter mounting used on special burners when required.



USEFUL FACTS TO ASSIST IN BURNER SELECTION.

1KW = 3412 Btu.hr = 859Kcal.hr = 3.6MJ.hr.

1mbar = 0.4" w.c. = 10mm w.c. = 100Pa.

WHEN ORDERING PC GAS BURNERS PLEASE SPECIFY THE FOLLOWING INFORMATION:-

Type of gas

Gas supply pressure (to inlet of burner valve assembly)

Electric supply data :

Burner motor voltage (1 or 3 phase)

Control circuit voltage (1 phase)

Type of temperature control required. i.e. 0n-off high/low, modulation etc.

Valve and burner specification required.

Country of installation

Details of application.

INSTALLATION, COMMISSIONING AND MAINTENANCE :-

If required a complete delivery, installation and commissioning service can be supplied, including the manufacture and installation of associated steel fabrications and ductwork.

An installation and maintenance manual is supplied for all burners; commissioning must be carried out by competent engineers in accordance with the instructions in the manual.

Maintenance and service contracts are available - this normally includes scheduled site visits by our engineer and the free of charge supply of burner consumables such as ignition electrode and flame rectification electrode.

A selection of information data sheets (C-B7-INF***) are available showing physical dimensions of types of PC burners and some technical detail.

A selection of complete general arrangement drawings (M3-PC-) are available showing burner assemblies complete with valve assembly and ancillary equipment.

ICAM

ICAM B.V.
Spoorlaan 37 A 3645 EK Vinkeveen
Tel: 0297-264444 Fax: 0297-266690
E-mail: info@icam.nl http://www.icam.nl

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