

C-B13

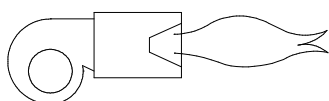
rev. 12/95

ICAM



TYPE FC
GAS BURNER

COMTHERM
PACKAGE BURNER



THE FC BURNER

The 'FC' series of 'FUME CONE' gas burners have been specifically developed for fume incineration applications on a wide range of industrial plant systems; typical applications include the incineration of exhaust fumes from paint solvent and curing ovens etc.

The nozzle and lance are manufactured using high grade heat resistant stainless steels.

The fume cone itself is manufactured from very high quality heat resistant Inconel alloys so as to maximise plant life and operating reliability.

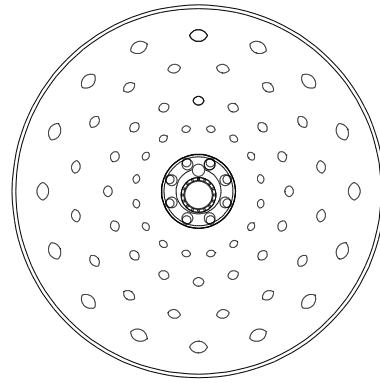
The complete FUME CONE burner assembly normally consists of the fuel nozzle and lance assembly fitted with a fume -process cone, complete with insulated steel mounting plate.

The mounting plate is usually circular and fitted with either 250mm or 300mm of insulation.

The mounting plate is fitted with a viewing window, optional U.V. flame sensor mounting and pressure tests and cooling air connection points.

The spark electrode fitted into the fuel lance can be withdrawn from the back of the assembly.

The nozzle mix design of the burner and the progressive air mixing feature of the combustion head ensure that the burners can operate with high turn down capability; turndown rates of 25:1 are possible depending on burner application and selection.



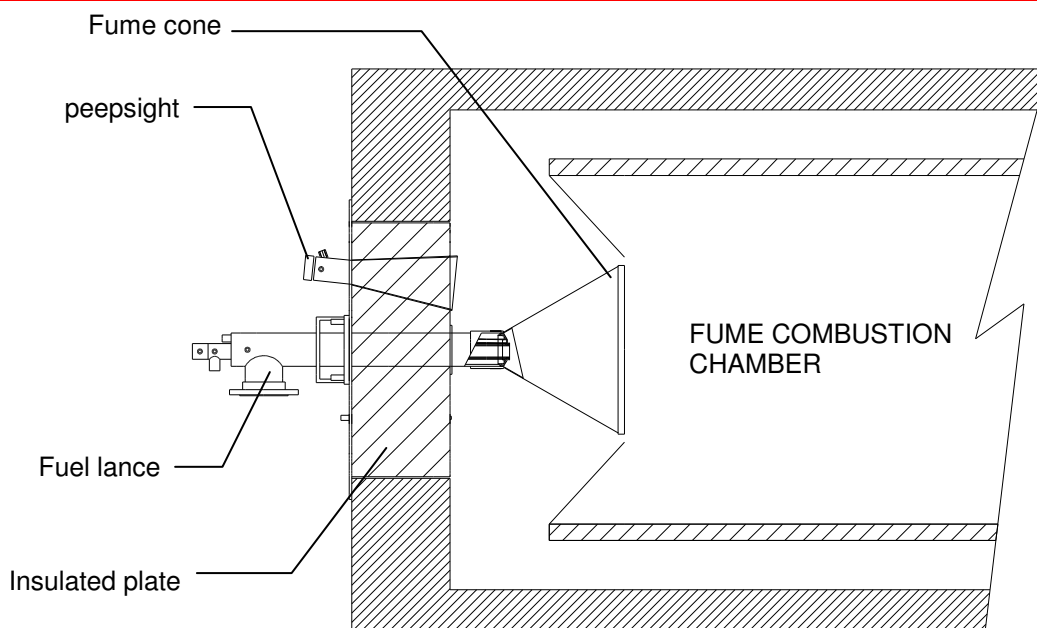
COMPLETE PREPACKAGED BURNERS

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

All combustion air for the burner is supplied from the process air-fumes; the fumes must therefore have a minimum oxygen content of 18%. Except in special cases the burner does not require a separate combustion air fan.

Pressure switches, ignition spark plug, flame sensor and all electrical components on the burner are prewired to a terminal enclosure mounted on the burner.

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



TYPICAL FUME INCINERATION SYSTEM

FUEL SUPPLY

Series FC burners can be supplied for operation on natural or LP gases or light fuel oils.

All valve assemblies on the burner are sized to suit a nozzle gas pressure of 10 mbar (on all common fuel gases). Burners can be supplied to suit other gas types and supply pressures. Inlet supply gas pressures must be adequate to overcome valve assembly, nozzle resistance and any incineration chamber back pressure.

BURNER SIZES

The FC burners are available with thermal capacities up to 8800kW and with fume cone diameters up to 1100mm.

The combustion cones of the burners are available in a wide selection of sizes and air-fume hole patterns. Burner cones are sized so as to have a 8mbar pressure drop across the cone for adequate combustion air supply.

The fume-process air annulus around the burner should be sized to produce the 8mbar drop for the full fume volume.

TYPES OF CONTROL AVAILABLE

All FC burner assemblies are supplied suitable for modulation control.

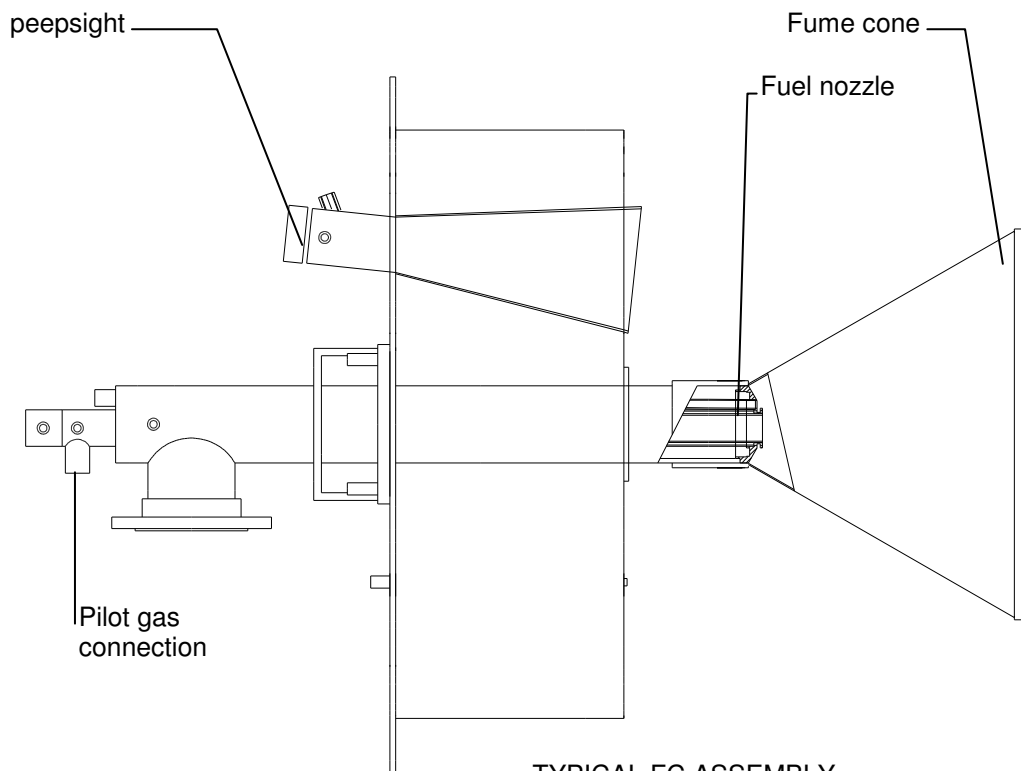
The control valve may be electrically or pneumatic operated depending on requirements.

All common types of control signal can be accommodated.

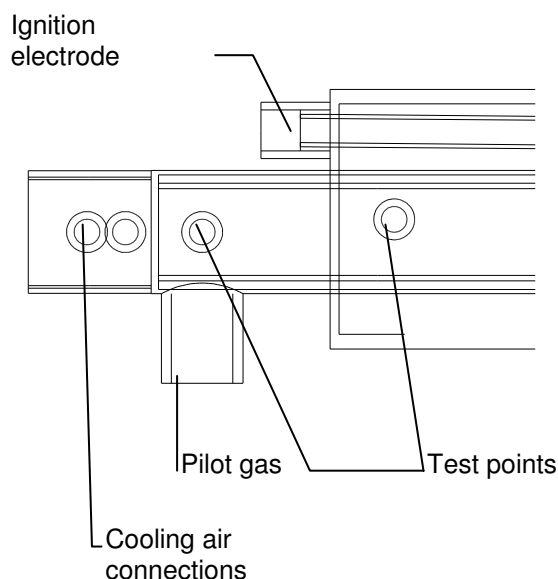
The burners can be supplied with loose - remote mounted control consoles containing temperature control instrumentation and process plant switchgear and control gear.

ELECTRICAL SUPPLY

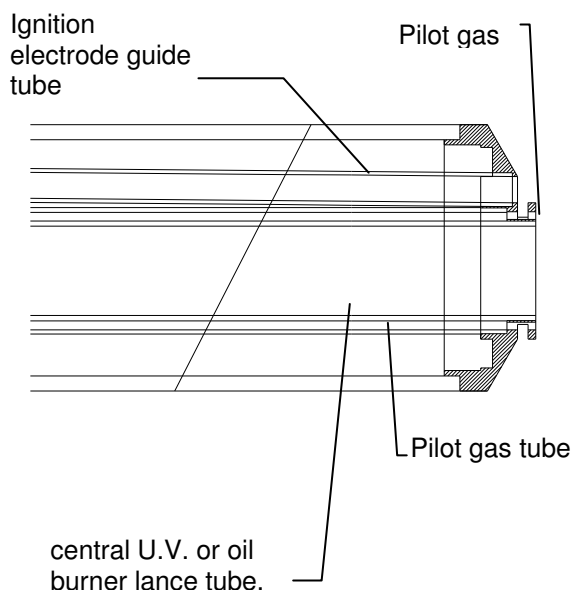
Burners can be supplied to suit almost all types of electrical power supply; including 220/380/440v three phase (50 or 60Hz) power supply and with 110/120v or 220/240v control circuits. Burners to suit other electrical supply voltages can be supplied specially to suit a specific application requirement.



FUEL LANCE CONNECTIONS



FUEL NOZZLE



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 FC GAS BURNERS PLEASE SPECIFY THE FOLLOWING INFORMATION:-

Type of fuel.

Gas or oil supply pressure (to inlet of burner valve assembly)

Control circuit voltage (1 phase)

Type of modulation temperature control signal to be used.

Valve and burner specification required.

Country of installation

Fume inlet temperature

Total fume volume

Fume incineration temperature required.

Type of fumes.

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-B13-INF**) are available showing physical dimensions of types of FC burners and some technical detail.

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

As our policy is one of continuous improvement we reserve the right to amend specifications at any time without prior notice.

ICAM

ICAM B.V.

Spoorlaan 37 A

Tel: 0297-264444

E-mail: info@icam.nl

3645 EK Vinkeveen

Fax: 0297-266690

http://www.icam.nl

