



Passion for combustion
since 1983

Staged fuel / Staged air dual fuel burners

Our "SA" series is your next choice for a new installation or retrofit.

I.C.E. has a reputable experience in the production of burners for fired heaters.

Ranging from small utility heaters to critical furnaces we have a broad range of burner sizes to suit your heating demand.

Natural or forced draft (cold or preheated air up to 400°C), round shape flame, the "SA" series fits your combined fuel fired application. Our tailor made design will be at your disposal to meet desired flame shape and heat output as well as thermal profile along the furnace.

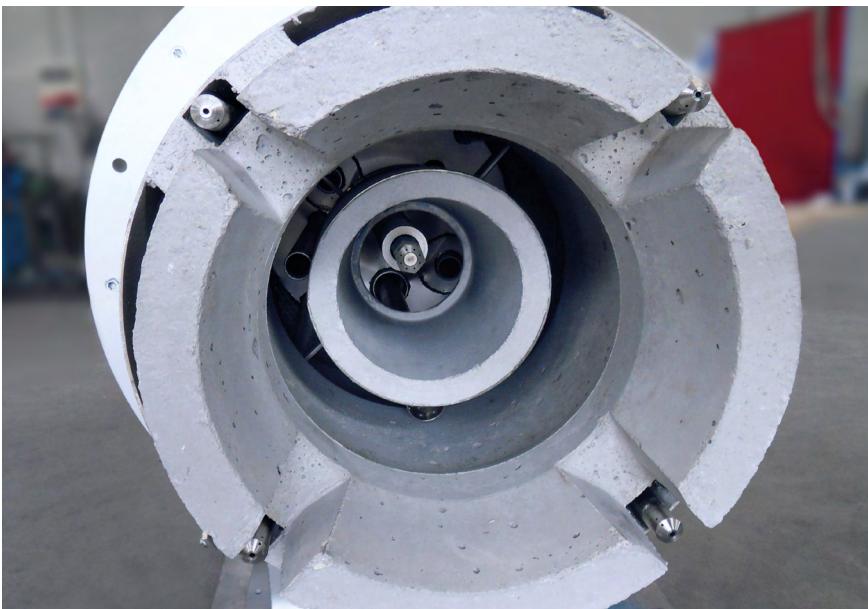
Coupling "Fuel Staging" and "Air Staging" this burner is able to catch the best of two worlds in order to meet today's stringent environmental requirements.

Robust construction is a further good news for operators searching for a robust equipment able to stand harsh environment of refineries, chemical plants and upstream facilities.

This burner has proven its reliability in several application, including Topping Furnaces, Visbreaker units and many others.

Heat flux control can be maximized by our in-house calculation tools for tips drilling and ports orientation.

Basing on our track list of successful projects, we can match your process need, please contact us for further details!



Technical features

MECHANICAL & CONSTRUCTION CHARACTERISTICS

Standard execution with carbon steel windbox.

Special executions in AISI 304 for low temperatures / aggressive environments.

Sound / heat insulation with mineral wool / CS steel plate.

Chrome / nickel gas tips and flame stabilizer (air diffuser).

Compact installation dimensions.

PROCESS DATA / APPLICATIONS

Available heat releases:

- From 0.8 up to 8.0 MW

Operating pressures:

- Fuel gas from 0.8 to 3.0 Barg
- Fuel oil from 3.5 to 10 Barg
- Oil guns with fixed or deltaP atomising medium

Low NOx performances:

- < 50 ppmV gas firing with air preheated up to 300°C
- < 110 ppmV with diesel oil
- < 230 ppmv with heavy oil

Negligible CO / UHC in all operating conditions.

Low sound pressure level.

Flame stability with excess air ranging from 1.5% O₂ up to 15%.

High reliability and low maintenance:

- Long service life assured

Compact flame.

HEATER TYPES

Almost all process furnaces including:

- Vertical cylindrical
- Cabin (horizontal or vertical firing)
- Multi-cell heaters (horizontal or vertical firing)

PROCESS APPLICATIONS

All standard applications including critical heaters:

- Topping / Crude heaters
- Vacuum heaters
- Visbreaking heaters

Member of CISQ Federation



CERTIFIED MANAGEMENT SYSTEM
ISO 9001

RINA, certificate n° 20585/09/S

I.C.E. INTERNATIONAL COMBUSTION EQUIPMENT S.r.l.

I.C.E. S.r.l.

Headquarters

Via Cesare Battisti, 112
20862 Arcore (MB) - ITALY
Ph +39 039 61 80 445
Fax +39 039 61 68 84

info@it-ice.com - www.it-ice.com

Workshop / Test Area

Via degli Artigiani, 25/27
26010 Cremosano (CR) - ITALY
Ph +39 0373 27 36 54
Fax +39 0373 29 12 59