



Passionforcombustion  
since 1983

## Down firing burners

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I.C.E. can fit your top fired reformers with the state of the art down firing burners, able to work from induced draft up to high temperature, low O<sub>2</sub> content TEG gases.

Flame shape and compact sizes are ensured to guarantee no flame impingement on catalytic tubes.

Our design allows to promote compact flames to enable close proximity designs with no overlapping of flames.

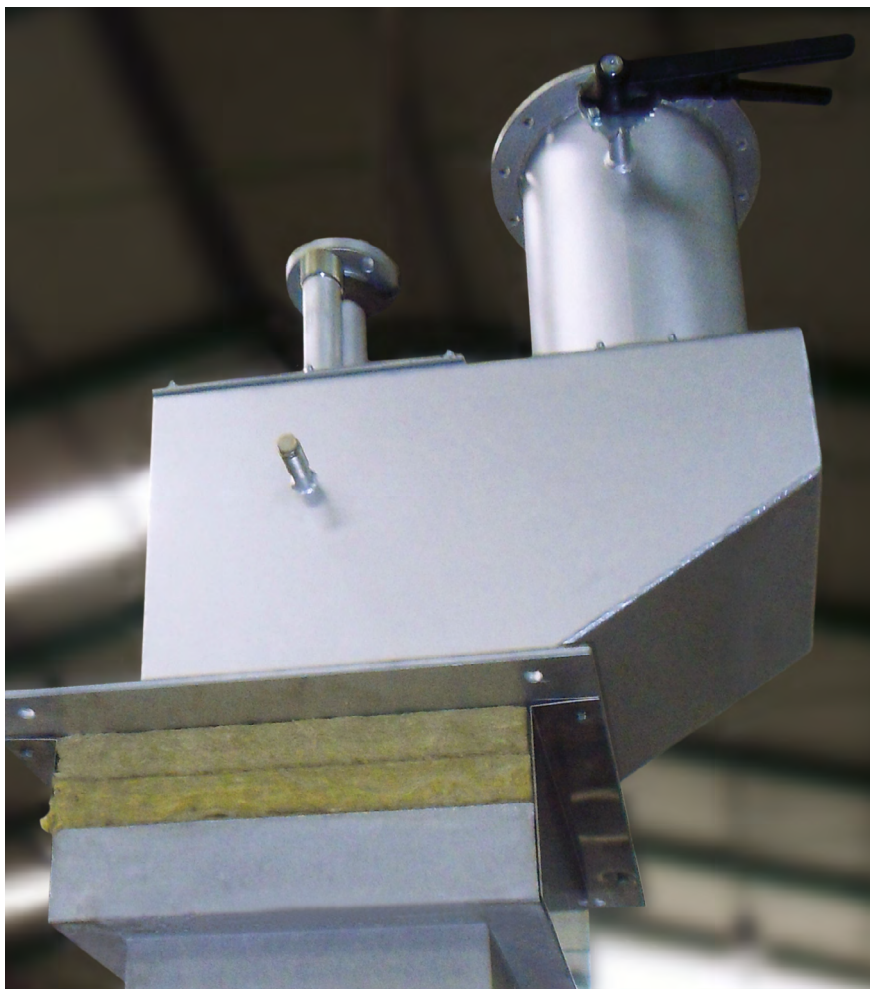
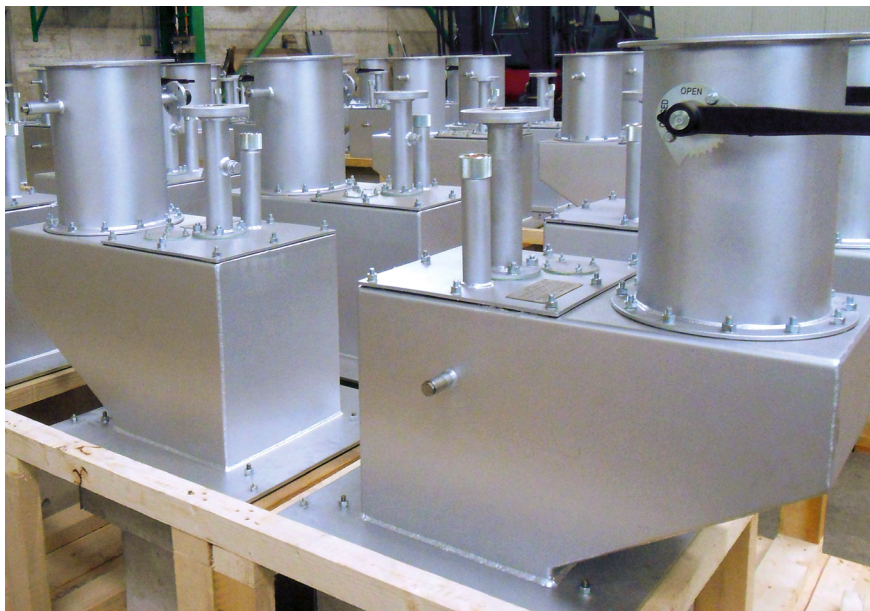
Emissions are manageable by use of raw designs coupled with friendly PSA compositions or via staged fuel design.

Cabinet design, piping layout to fit space needs on reformer penthouse.

Materials for construction fully customizable, together with tile design to fit customer / licenser needs.







## Technical features

### MECHANICAL & CONSTRUCTION CHARACTERISTICS

Single blade air dampers for on / off use.

Cabinets in CS / LTCS / SS.

Nozzles in AISI 310/HK.

Refractory 70 / 90%  $Al_2O_3$  content or as specified.

Piping in CS / LTCS / SS.

All internal parts (including stabilizers) are available for access and maintenance.

All mechanical parts are designed to fit roof installation and typical top fired constraints.

Stabilizers from SS or cast refractory materials.

Plenum / double box / single cabinets designs available.

### PROCESS DATA / APPLICATIONS

Available duties:

- 0.4 to 4.0 MW

NOx reducing method:

- Fuel staging, PSA

Excess air:

- 5% to 25% or more

Compact flame design, narrow to extreme tight space installation.

Heat flux to fit customer needs.


Very high turn-down up to 6:1 or more.

Fuels are no concern:

- Wide range of compositions allowed

NOx ranges:

- 20 to 100 ppmV according to firebox and preheated air temperature, as well as PSA composition

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

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

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**ISO 9001**

RINA, certificate n° 20585/09/S