

DATASHEET

DFR Burner

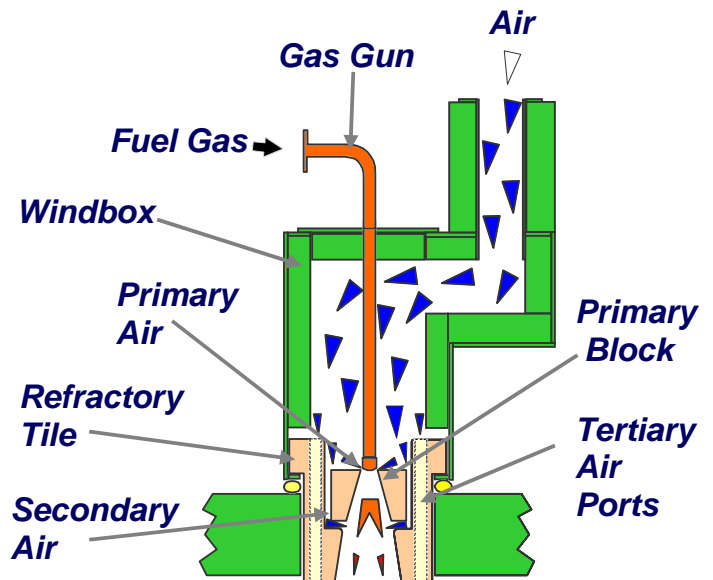


Applications

- Steam Reformer
 - Ammonia
 - Hydrogen
 - Methanol
 - Synthesis Gas

Design Requirements

- High firebox temperature
- Uniform heat over long process tubes
- Tight flame control
- Minimum burner loading on furnace roof
- Close burner to burner spacing

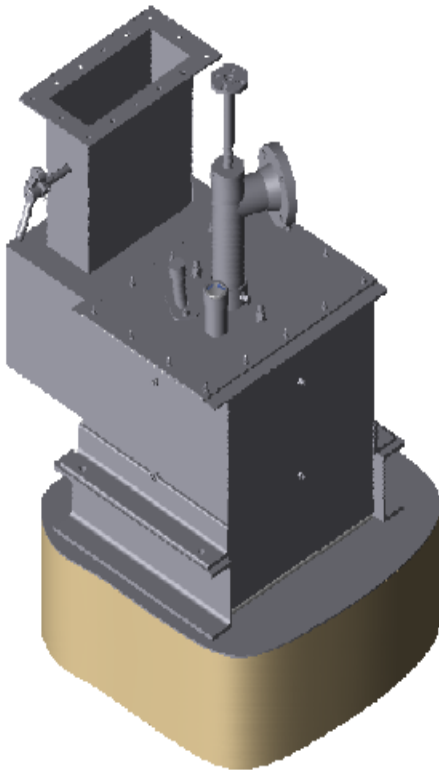


Standard Supply

- **Windbox** - 5 mm carbon steel insulated with 50 to 75 mm mineral wool fully retained with perforated plate to provide lower casing surface temperatures - air inlet can be round, square or rectangular
- **Damper** - integral with the windbox and fully lockable, with external position indicator in any position.
- **Refractory Tile** - Fully fired (>1000°C) rated at 1650°C service temperature, removable whilst the windbox is in situ, incorporating tertiary air staging ports
- **Primary Block** - 1650°C castable refractory with stainless steel casing adjustable to allow for accurate air pressure drop balancing between inner and outer row burners
- **Single or Dual Gas Gun** –removable with a flanged single gas inlet (dual inlets for dual gas)
- **Oil Gun** – (oil only and gas & oil combination) designed specifically to handle light distillate fuels to avoid vaporisation of the fuels within the gun causing vapour locks.
- **3 valve safety interlock** – optional when firing naphtha to ensure correct purging and provide an interlock when removing the oil gun

Key Features

- Standard, low or ultra low NOx
- Range of fuel firing,
 - Gas, light distillate, gas & oil combination, dual gas
- Compact design allows close fitting on reformer roof
- Plenum mounted or windbox version available
- Adjustable primary block
- Pre-fired burner tile fully supported within burner casing
- Ignition by means of portable or fixed source
- Forced or natural draught versions
- Turbine Exhaust Gas can be used as alternative to standard combustion air



Specifications

- **Liberation** 0.5 to 3.5 MW
- **Fuels** Gas - PSA, Nat. Gas, Hydrogen
Oil - Light Distillates
- **Excess Air** 5 to 25 %
- **Fuel Pres.** Gas 0.1 to 2.0 kg/cm², Oil 4 to 6 kg/cm²
- **Register Draught Loss** 20 to 200 mmwc

Assumed conditions unless stated / requested

- **Furnace Temperature** 1,050 °C
- **Register Draught Loss** Natural Draught 20 mmwc
Forced Draught 100 mmwc
- **Combustion Air Temp** 300 °C
- **Excess Air** 10 %
- **Fuels – dual gas** Natural Gas @ 1 kg/cm² /
PSA gas @ 0.2 kg/cm²
- **NOx** 100 mg/Nm³

For further information on combustion equipment please contact the head office:

Hamworthy Combustion Engineering Limited
Fleets Corner
Poole Dorset BH17 0LA
Tel: +44 1202 662700
Fax: +44 1202 665333
Email: info@hamworthy-combustion.com
Website: <http://www.hamworthy-combustion.com>

©2008 Hamworthy Combustion Engineering Limited – All rights reserved

Process/DFR/July 2008/Rev. 2

Hamworthy Combustion Engineering Limited reserve the right to make changes and improvements which may necessitate alteration to the specification without prior notice


HAMWORTHY
COMBUSTION

Incorporating:
PEABODY ENGINEERING
AIROIL - FLAREGAS
CHENTRONICS