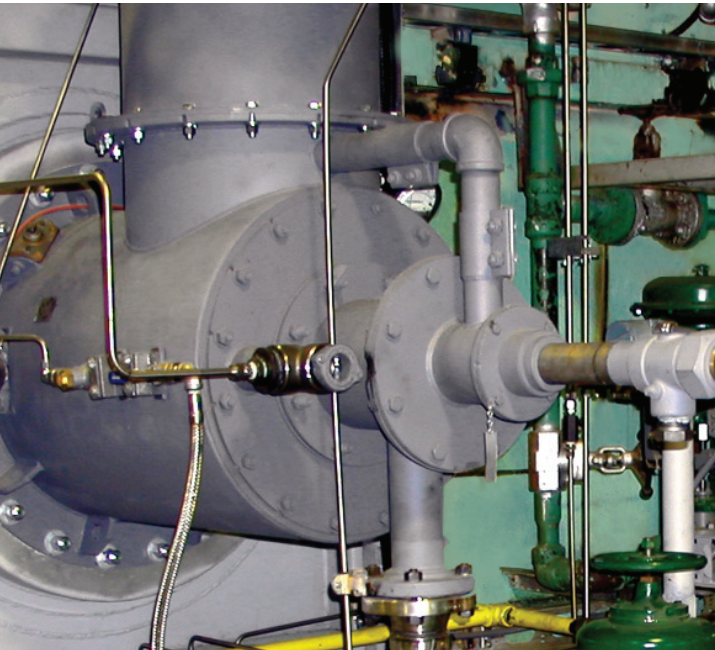


MAGNA-FLAME RM™



Fives North American's Magna-Flame RM has been serving the boiler and process heater industries for over 25 years, and with over 1,000 units in operation, this proven workhorse is now solving today's tough environmental problems.

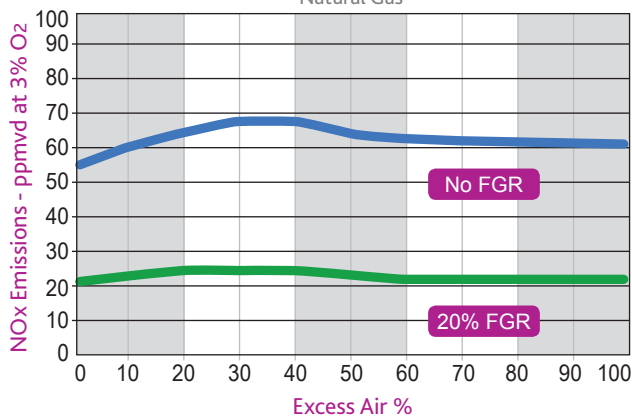
The Magna-Flame RM uses **rapid mixing** technology and internal chamber gas recirculation to reduce NOx and CO emissions. For stringent applications the RM accepts external flue gas recirculation (FGR) to further reduce NOx far below current regulatory requirements.

- Boilers
- Process Heaters
- Air Heaters
- Dryers and Calciners
- Incinerators
- Soil Remediation

Low emissions dual-fuel burner

Typical RM Burner Emissions

Natural Gas



Features

- High flame intensity
- Sizes from 15 to 150 million Btu/hr
- Turndown up to 10:1 (gas), 5:1 (oil)
- Prepackaged and tested burner management systems available
- Low emissions with FGR
- Heavy duty construction
- No moving parts
- Gas and liquid fuels including heavy oils
- Full line of pre-engineering and aftermarket services available

How It Works

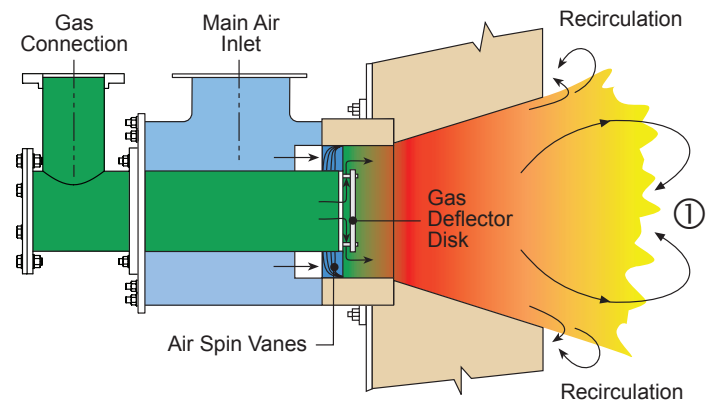
The Magna-Flame RM uses **rapid mixing** technology and self-induced chamber gas recirculation to minimize the production of NO_x and CO.

Fig. 1 illustrates how the fuel gas and combustion air enter the burner, where they are rapidly mixed at the base of the swirl vanes. This rapid mixing technology eliminates the NO_x-generating hot spots that are found in many conventional burner designs.

The fast recirculating action in the burner throat induces oxygen-deficient gases from the combustion chamber to reduce NO_x and CO emissions.

FGR may be added to the combustion air stream to dilute the flame temperature and to further reduce emissions.

Fig. 1 - Magna-Flame RM (gas fired version)



① Internal recirculation zone induces combustion chamber gases

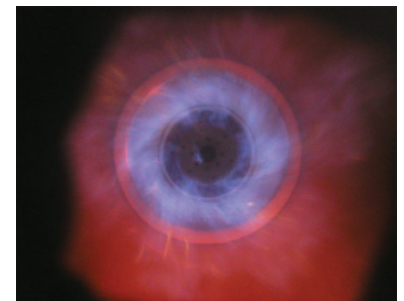
Oil Firing

Because of the Magna-Flame RM's rapid mixing and internally recirculated flame, it is also an excellent oil burner. With an efficient tip emulsion atomizer, the RM is capable of firing a wide range of liquid fuels including #2 and #6 distillate fuel oils.

The internally recirculated flame makes the RM effective at minimizing thermal NO_x. And combined with FGR, the burner has demonstrated reduced NO_x emissions with certain oils comparable to those attained with gas flames.



RM Burner firing light oil



RM Burner firing natural gas



Fives North American Combustion, Inc.

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