RS 300-800/E-/EV

The RS 300-400-500-650-800/E-EV burner series with electronic cam and variable speed motor is extended up to 30677 MBtu/hr.
The RS 300-400-500-650-800/E-EV series has been designed for use in commercial and industrial applications, such as hot water boilers and industrial steam generators, where the electronic cam device improves the burner performances in terms of air/fuel ratio control and possibility of remote monitoring. All these burners are ETL listed according to UL795 6th Edition and to CGA 3.4

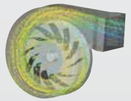


Main features

- Hight turn ratio
- Remote status/alarm signals available on terminal strip
- Gas supply installation both on right and left hand side
- Low NOx emissions
- Low sound emissions
- Low electrical consumption
- Protection level NEMA 3
- Hinge system to ensure combustion head easy maintenance
- Digital display for easy commissioning and status-alarm-oxygen monitoring
- Valve proving system included inside burner control
- Independent ignition point position
- Additional information on burner status and error history
- Remote monitoring and control by Modbus protocol
- Oxygen control with zirconium probe as optional in RS 300-400-500-650-800/EV models.



Variable geometric combustion head guarantees high turn-down ratio and Low NOx emissions.



High efficiency ventilation unit (low fan motor power and low sound emissions) designed by our R&D department through the application of laboratory experience and fluid-dynamic simulation software.

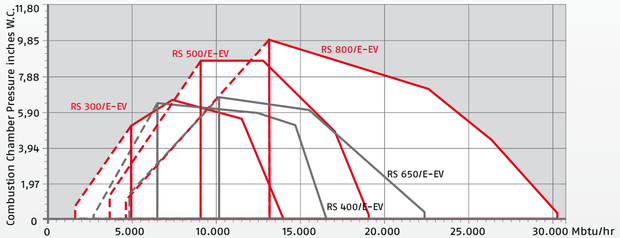
FIRING RATES OUTPUT	
Model	MBtu/hr
RS 300/E-EV	1894/5113 - 14392
RS 400/E-EV	3598/6930 - 17384
RS 500/E-EV	3787/9468 - 19580
RS 650/E-EV	4879/10236 - 22347
RS 800/E-EV	4545/13256 - 30677

LOW SOUND EMISSIONS	
Model	dbA
RS 300/E-EV	82
RS 400/E-EV	85
RS 500/E-EV	87
RS 650/E-EV	90
RS 800/E-EV	88

Sound Pressure measured in manufacture's combustion laboratory, with burner operating on test boiler and at a maximum rated output

LOW NOx EMISSIONS	
Models	ppm
RS 300/E-EV	< 30
RS 400/E-EV	< 30
RS 500/E-EV	< 30
RS 650/E-EV	< 30
RS 800/E-EV	< 30

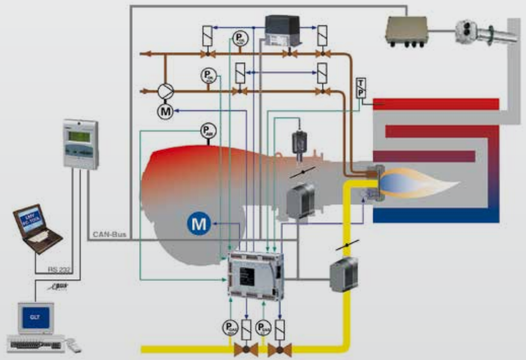
Firing rates



The Firing Rate value range has been obtained considering a temperature of 68° F (20°C) and an atmospheric pressure of 394" WC

Electronic Cam System

The electronic cam is a microprocessor based burner management component system for burner control and supervision. The system components are interconnected via a bus system. Communication between the individual bus users takes place by a reliable system-based data bus. All safety-related digital outputs of the system are permanently monitored by e-contact feedback network.



Dual Fuel Burner configuration

Oxygen Analyser

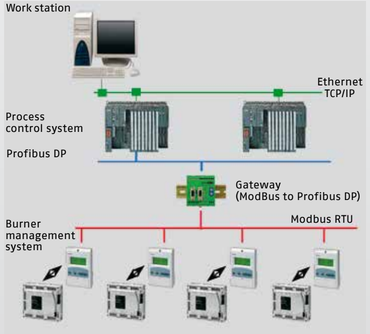
The zirconium oxygen analyser allows control of the combustion according to the residual oxygen content in the exhaust gases. Oxygen probe installed on the chimney is connected directly to an interface card inside the burner control panel. The oxygen detection system, further operates on the air damper to get lower air excess and therefore higher efficiency, shows continuously on burner display the oxygen percentage in exhaust gas. It is available as optional for RS 300÷800 EV BLU models.



Available as optional in /EV versions

Remote control interface (LMV 5)

The burner management system, included in all burners, collects and stores information from one or more burners. The information is available for transmission to an external source via RS232 data link. The system supports the Modbus protocol as standard (Profibus protocol can be used by installing an interface gateway). In this way, information can be accessed by third parties systems, stored and managed as required by the customer.





Control panel in RS 300-800/E-EV BLU models.



Riello Low NOx RS 400/BLU

Modular burner for various configurations

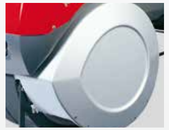
RS 300-400-500-650-800/E-EV burners have been designed on the basis of the modularity concept: the modules can be combined to offer technical variants which allow the burner to be used in case of special applications different from the standard (i.e.: in terms of Regional or National special Directives, local requirements in terms of plant design and installation, special requirements in terms of interface/integration with the plant system). These burner variants can be developed upon request and after a technical-commercial evaluation.



Combustion head module



Stepper motor for air flow



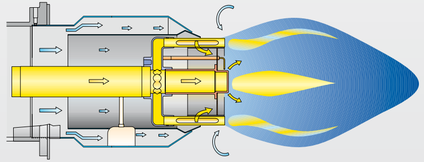
Ventilation module



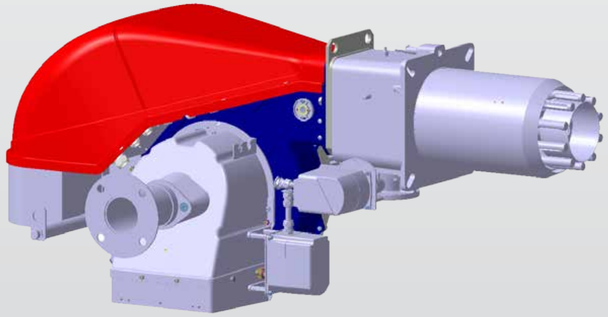
Terminal board

SAFE AND GREEN

Riello Burners experience in combustion technology is very well demonstrated in the combustion head of New RS burner models and assures smooth ignition, safe operation, and environmentally friendly emissions. Riello burners excels in producing burners which perform well with minimal excess air, this enhances system efficiency and reduces greenhouse gas emissions such as C02. With oxygen levels of only 3% (*) typical in the products of combustion and turndown ratios of up to 10-1 (*) on natural gas, system efficiencies are truly maximised. In addition to our standard product we also have available Low N0x models which use an Advanced Combustion Technology in order to reach N0x values of less than 30ppm (*) during the combustion of natural gas without the requirement of Flue Gas Recirculation; this enhances system efficiency in comparison with traditional FGR systems and reduces system/installation costs.



(*) NOx emissions and Modulation ratios are verified in our Research Center; not all field applications allow similar performance. If guaranteed emissions and/or turndown are required please contact Riello Burners Commercial and Technical Department.



Riello Burners a world of experience in every burner we sell.



[1]



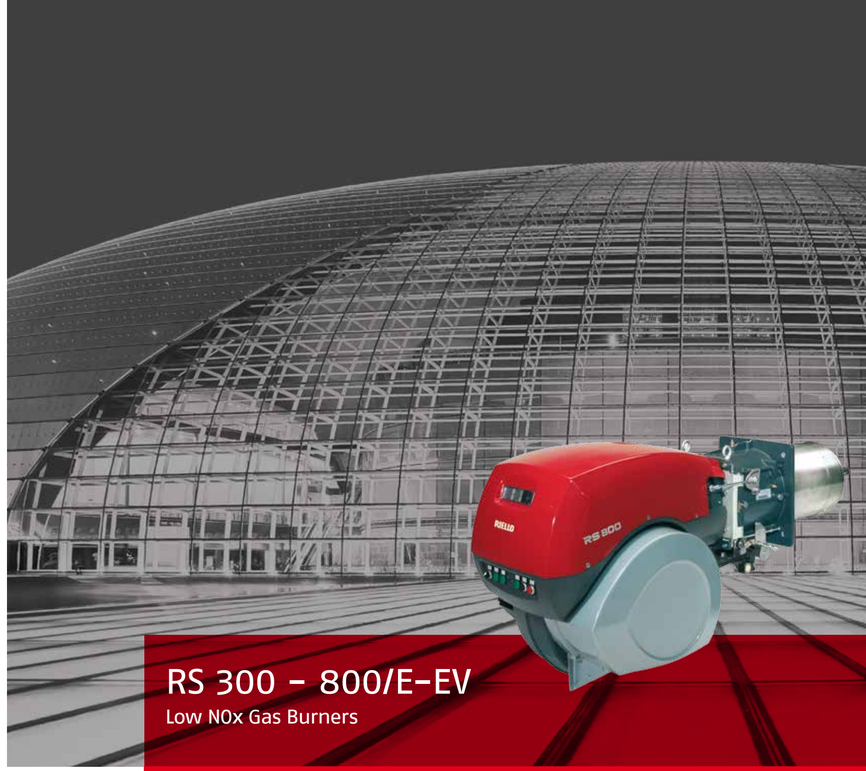
[2]

[1] BURNERS PRODUCTION PLANT
S. PIETRO, LEGNAGO (VERONA) - ITALIA

[2] HEADQUARTER BURNERS DIVISION
S. PIETRO, LEGNAGO (VERONA) - ITALIA

Across the world, Riello sets the standard in reliable and high efficiency burner technology.
With burner capacity from 17 thousand to 163 million Btu/hr, Riello gas, oil, dual fuel and Low Nox burners deliver unbeatable performance across the full range of residential and commercial heating applications, as well as in industrial processes.
With headquarter in Legnago, Italy, Riello has been manufacturing premium quality burners for over 90 year.
The manufacturing plant is equipped with the most innovative systems of assembling lines and modern manufacturing cells for a quick and flexible response to the market.
Besides, the Riello Combustion Research Centre, located in Angiari, Italy, represents one of the most modern facility in Europe and one of the most advanced in the world for the development of the combustion technology.
Today, the company's presence on worldwide markets is distinguished by a well-constructed and efficient sales network, alongside many important Training Centres located in various countries to meet its customers' needs.
Riello has 13 operational branches abroad (in Europe, America and Asia), with customers in over 60 countries.

11/2014
PQ0005NA05



RS 300 - 800/E-EV

Low NOx Gas Burners

Product Overview

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