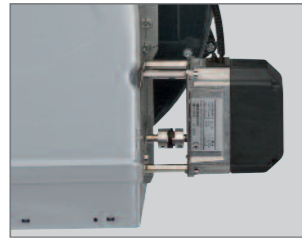


Modular burner for various configurations

RS 200-250-300-400-500-800/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.



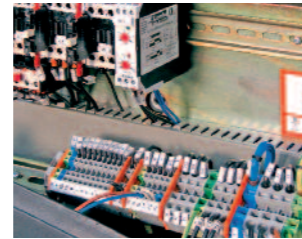
Combustion head module



Stepper motor for air flow



Ventilation module



Terminal board

Configuration selection table

In the following table you will find the options available: further special variants can be evaluated upon request.

		GAS						OIL					DUAL FUEL					
		RS 200	RS 250	RS 300	RS 400	RS 500	RS 800	RL 250	RL 300	RL 400	RL 500	RL 800	RLS 250	RLS 300	RLS 400	RLS 500	RLS 800	
FUEL	N GAS	◊	◊	◊	◊	◊	◊											
	LPG	◊	◊	◊	◊	◊	◊											
	TOWN GAS			•	•	•	•											
	LIGHT OIL																	
	KEROSENE																	
AIR/FUEL SETTING	/M	•	•	•	•	•	•											
	/E	◊	◊	◊	◊	◊	◊											
	/EV	◊	◊	◊	◊	◊	◊											
	/P				•	•												
	/B																	
COMB.HEAD LENGTH	TC	◊	◊	◊	◊	◊	◊											
	TL	•	•	•	•	•	•											
	TX	•	•	•	•	•	•											
SAFEGUARD CONTROL SYST.	FS1	◊	◊	◊	◊	◊	◊											
	FS2	•	•	•	•	•	•											
NOX EMISSIONS (ppm@3%O ₂)	Gas < 100		◊															
	Gas < 40	◊																
	Oil < 124,5																	
	Oil < 92,5																	
MAINS ELECTRICAL SUPPLY	3/230V/50Hz	•	•	•	•	•	•											
	3/400V/ 50Hz	•	•	•	•	•	•											
	3/208V/ 60Hz	•	•	•	•	•	•											
	3/220V/ 60Hz	•	•	•	•	•	•											
	3/380/ 60Hz	•	•	•	•	•	•											
	3/460V/ 60Hz	◊	◊	◊	◊	◊	◊											
CONTROL VOLTAGE	230/50-60	•	•	•	•	•	•											
	120-60	◊	◊	◊	◊	◊	◊											

◊ Standard • On Demand

AIR / FUEL SETTING

/M	Mechanical Cam
/E	Electronic Cam
/EV	Electronic Cam with variable speed drive (inverter)
/P	Proportioning air/gas valve
/B	Two Stage

COMBUSTION HEAD LENGTH

TC	Standard combustion head
TL	Extended combustion head
TX	Customised combustion head

SAFEGUARD CONTROL SYSTEM

FS1	Standard flame control system (1 stop every 24 hours)
FS2	Continuous working (1 stop every 72 hours)

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



BURNERS PRODUCTION PLANT
S. Pietro, Legnago (Verona) - Italy



COMBUSTION RESEARCH CENTRE
Angiari (Verona) - Italy

Across the world, Riello sets the standard in reliable, high-efficiency, low- maintenance burner technology. With burner capacities from 17 thousand to more than 122 million Btu/hr, Riello oil, gas, 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 headquarters in Legnago, Italy, Riello has been manufacturing premium quality burners for over 85 years. The new manufacturing plant is equipped with the most innovated 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 burner technology.

Today, to meet its customers' needs, Riello Burners has a sales and support network that spans over 60 countries.

Throughout the United States and Canada, for more than 30 years, our staff and independent sales and support network are dedicated to providing applications engineering support, commissioning, hands-on training, ongoing technical assistance, and after-sales service.

Riello Burners - delivering reliable combustion solutions for our customers in North America and around the world.

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Mississauga, Ontario
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* Product Overview

RS 200÷800/E-EV BLU RS 250/E-EV MZ Low NOx Gas Burners



North America version

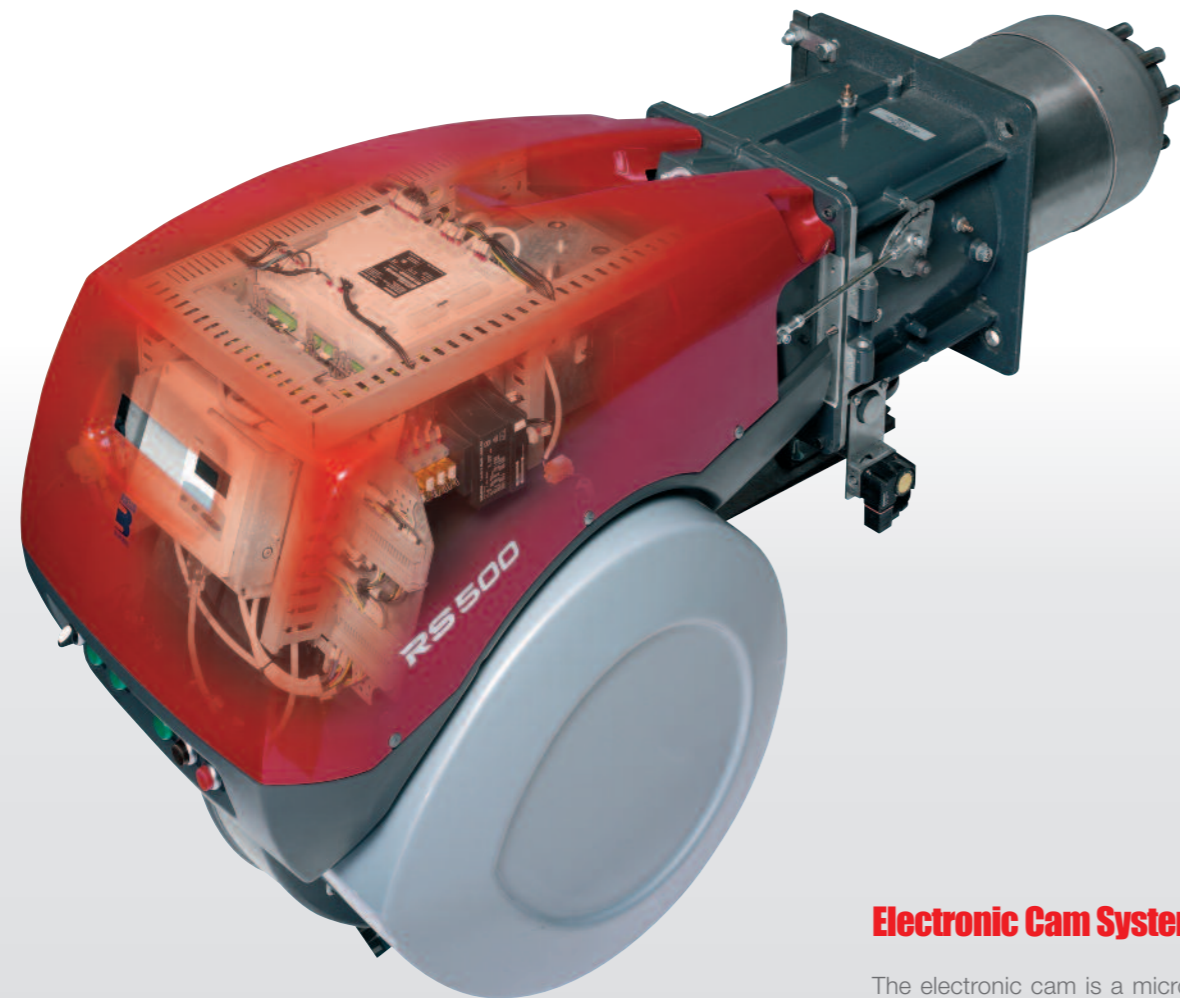
RIELLO
BURNERS

RS 200÷800/E-EV BLU RS 250/E-EV MZ

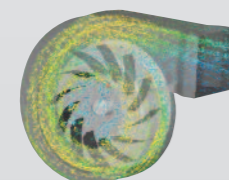
The RS 200-250-300-400-500-800/E-EV burner series with electronic cam and variable speed motor is extended up to 30677 MBtu/hr. The RS 200-250-300-400-500-800/E-EV series has been designed for use in commercial and industrial applications, such as hot water boilers and industrial steam generators, where 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

- High 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 300-400-500-800/EV BLU 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.

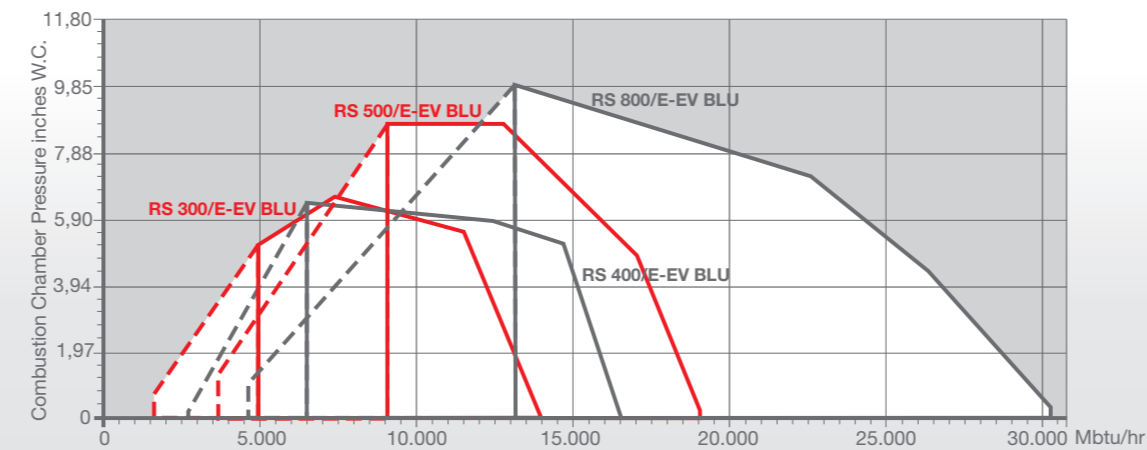
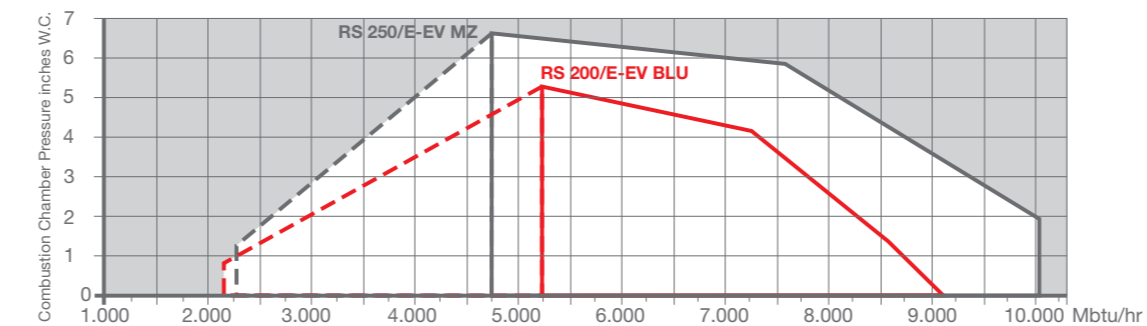
FIRING RATES OUTPUT	
Model	MBtu/hr
RS 200/E-EV BLU	2159-5208 - 9090
RS 250/E-EV MZ	2272/4734 - 10036
RS 300/E-EV BLU	1894/5113 - 14392
RS 400/E-EV BLU	3598/6930 - 17384
RS 500/E-EV BLU	3787/9468 - 19580
RS 800/E-EV BLU	4545/13256 - 30677

LOW SOUND EMISSIONS		
Model	Model	dbA
RS 200/E-EV BLU	83	
RS 250/E-EV MZ	83	
RS 300/E-EV BLU	82	
RS 400/E-EV BLU	85	
RS 500/E-EV BLU	87	
RS 800/E-EV BLU	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	Models	ppm
RS 200/E-EV BLU	< 30	
RS 250/E-EV MZ	< 50	
RS 300/E-EV BLU	< 30	
RS 400/E-EV BLU	< 30	
RS 500/E-EV BLU	< 30	
RS 800/E-EV BLU	< 30	

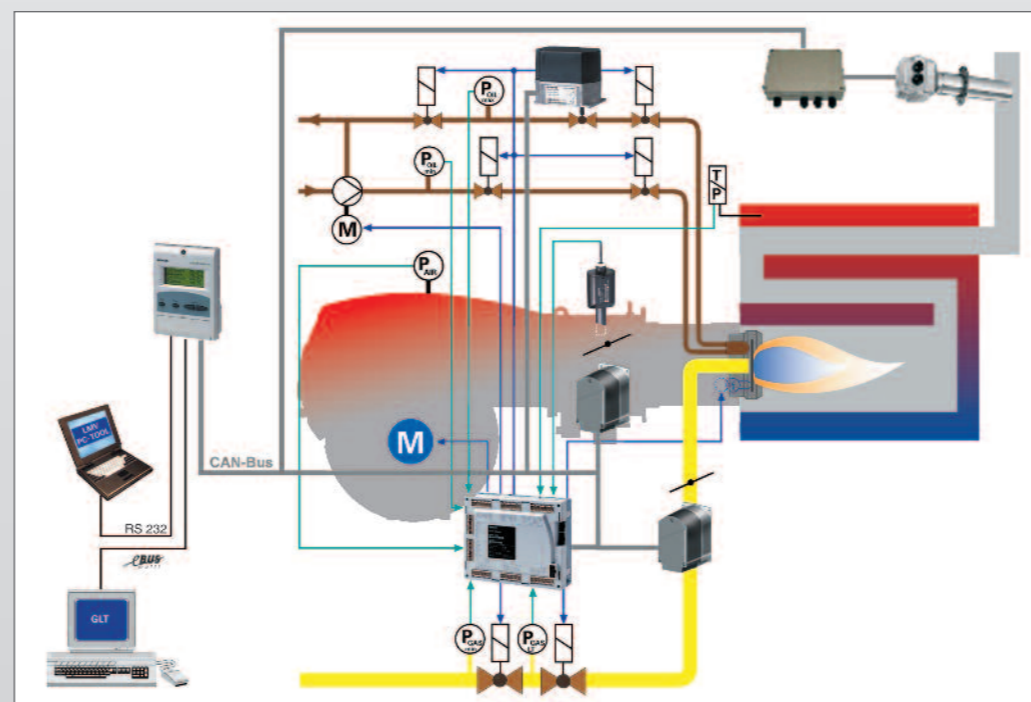
Firing rates



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

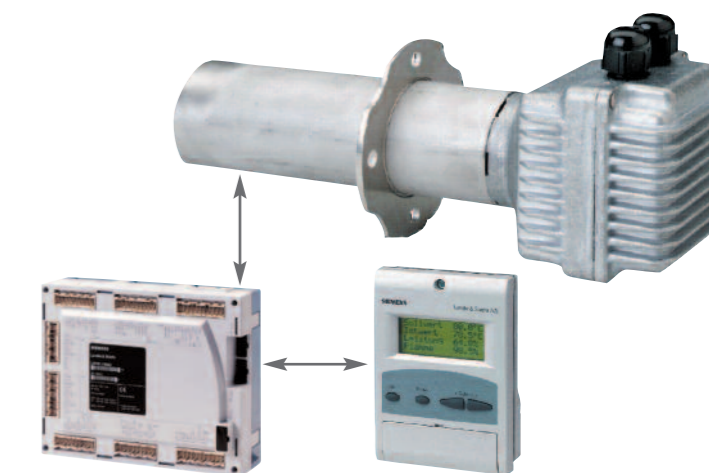
The electronic cam is a microprocessor based burner management component system for burner control and supervision. The system components are interconnected via a bus system. Communication between the individual bus users takes place by a reliable system-based data bus. All safety-related digital outputs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



Dual Fuel Burner configuration

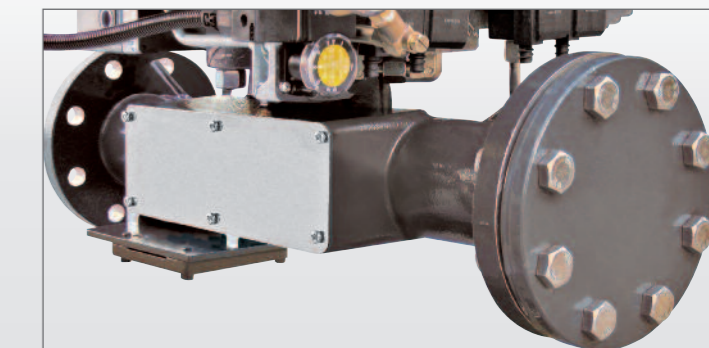
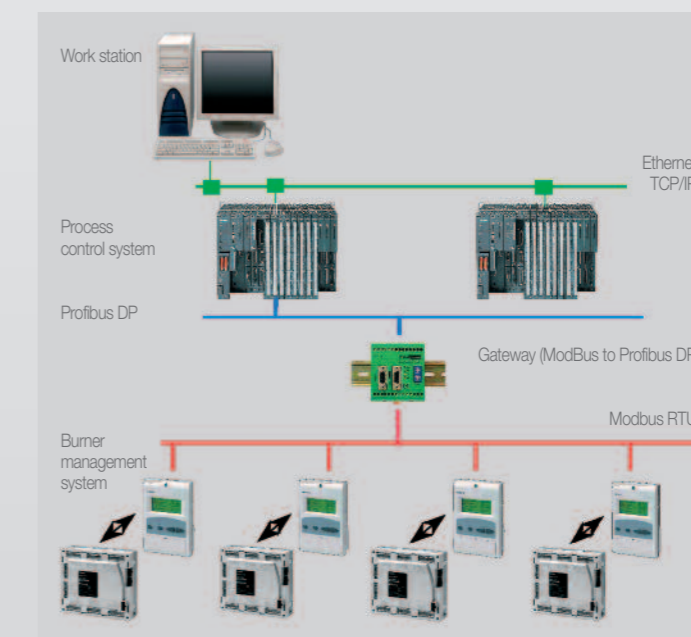
Oxygen Analyser

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.



Remote control interface

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.



Gas inlet.



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



400 BHP Kewanee retrofitted with Riello Low NOx RS 400/BLU