

AIR DUCT BURNERS RS 5-28-38-50-70-100 VA Direct heating applications with low temperature

The new Riello Burners RS 5-28-38-50-70-100 VA series of air duct burners with dedicated fan has been designed for the installation in direct air heating systems with medium-low temperature levels, as the ones adopted in spray booths.

These burners are particularly suitable for situations of:

- **Elevated re-circulation:** the correct quantity of combustion air is guaranteed thanks to the built-in fan.
- **High air delivery variability:** the dedicated fan ensures that the surface of the combustion head is always in contact with a steady air flow, to guarantee the optimum mixture for the combustion in each part of the combustion head.
- **Presence of impurities in the air to be treated:** the protection of the combustion head from the primary air flow avoids the settlement of impurities on the combustion module, granting long-lasting operation efficiency.

Burner Models

RS 5 VA 150 •	20/100	-	150	kW	RS 50 VA 450 •	90/360	-	530	kW
RS 28 VA 225 •	30/180	-	270	kW	RS 50/M VA 450 ♦	90/360	-	530	kW
RS 28/M VA 225 ♦	30/180	-	270	kW	RS 70 VA 600 •	120/530	-	700	kW
RS 38 VA 300 •	30/270	-	360	kW	RS 70/M VA 600 ♦	120/530	-	700	kW
RS 38/M VA 300 ♦	30/270	-	360	kW	RS 100 VA 900 •	200/700	-	1080	kW

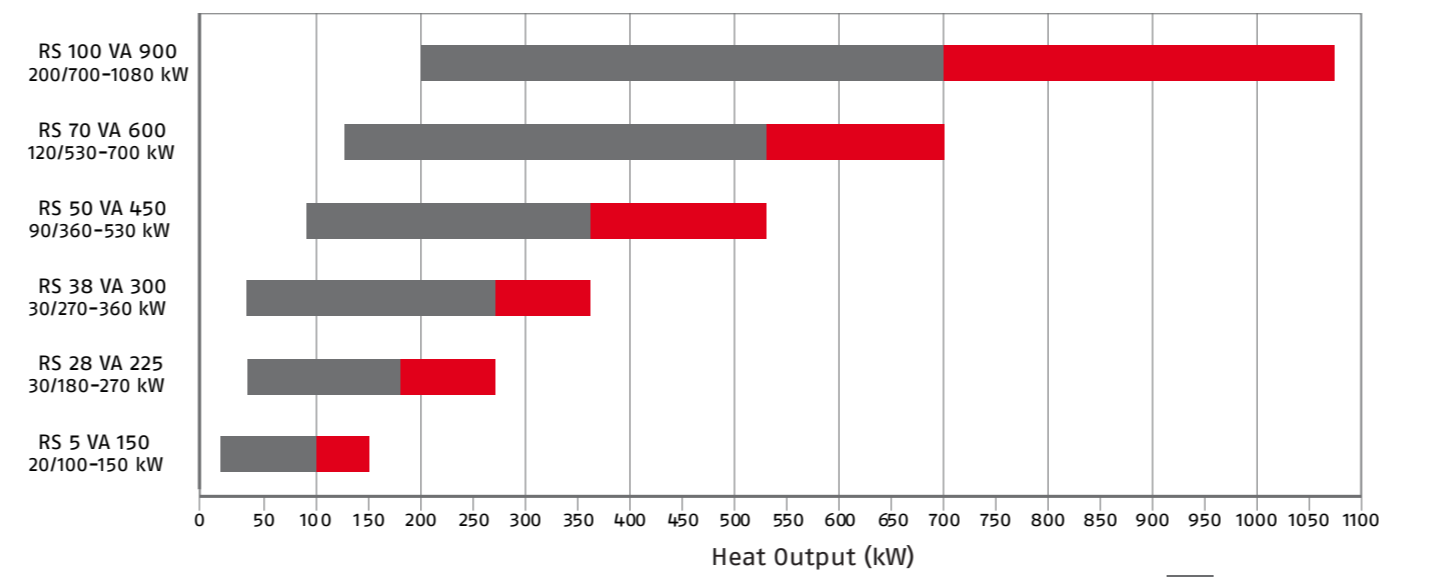
Main Features

- Two stage/progressive burners, suitable to modulating operation only with the installation of a PID regulator (optional accessory) or a an external signal 0-20 mA, 0-10 V converter (optional accessory)
- 1:8 turn down ratio
- Standard burners with intermittent operation (one stop every 24 hours); on demand, continuous operation is available with the installation of Siemens LGK 16.333 A27 control box
- Operation at 50 and 60 Hz
- Pre-assembled combustion head group, including flange for fixing to the booth
- Different combustion head lengths to suit the installation duct
- Natural gas or LPG operation without the need to install accessories
- Ignition through pilot burner
- "L" shape package configuration: with combustion head in angle configuration in to primary air duct
- Post-ventilation available
- Pre-defined gas trains range to meet different pressure and gas levels
- IP 44 protection level, according to EN 60529 Standard
- Conforming to 2006/42/EC Machinery Safety Directive and Technical Standard EN 746-2 "Industrial Thermoprocessing Equipment"

Advantages

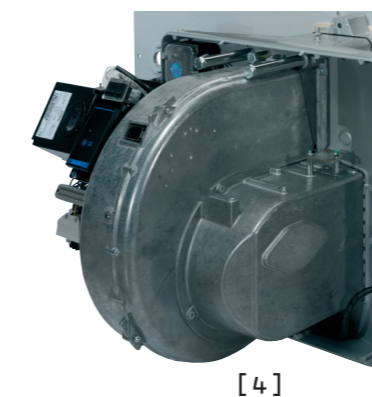
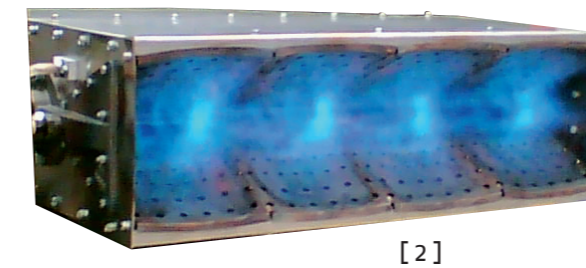
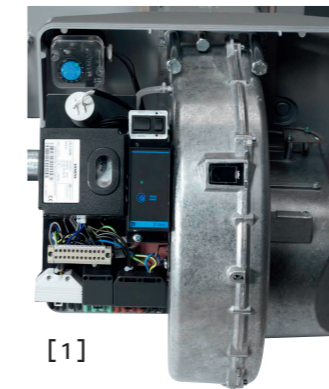
- Easy assembly between the ventilation group and the combustion head group thanks to sliding guides
- Rapid conversion from L1 to L2 configuration without the need of accessories or transformation kits
- Ready to install package
- Use of a well-known and consolidated structure
- Availability of spare parts in common with RS series burners
- Thermal exchange efficiency near to 100%
- Excellent flame stability and uniform combustion
- Simple use
- Reduced flame dimensions

Working Field



■ Modulation Field
■ Useful working field

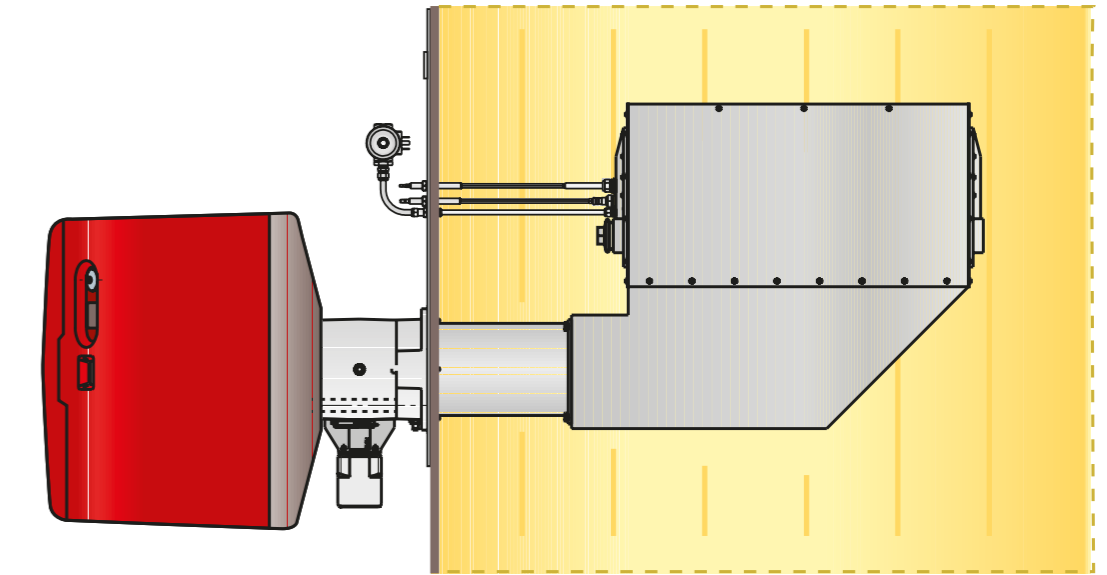
- Fixed Air
- ♦ Air adjustment with mechanical cam



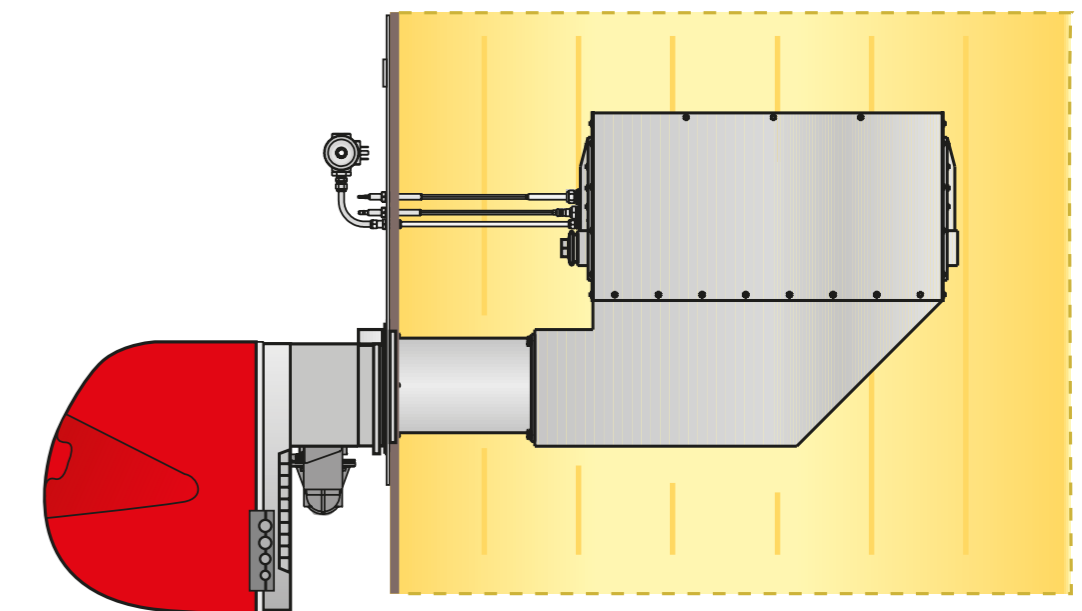
- [1] Burner Control Module
- [2] Combustion Head Group
- [3] Output Adjustment Group
- [4] Ventilation Group

Configurations

The package is proposed in the following basic configurations, with installation of the ventilation unit external to the air flow to burn. Configuration "L" shape are standard.



L1 - Angle configuration with combustion head developed in horizontal in primary air duct



L2 - Angle configuration with combustion head developed in vertical in primary air duct

Burner Models

BURNER MODEL		RS 5 VA	RS 28 VA	RS 38 VA	RS 50 VA	RS 70 VA	RS 100 VA
			RS 28/M VA	RS 38/M VA	RS 50/M VA	RS 70/M VA	
FUEL	Natural Gas	•	•	•	•	•	•
	LPG	•	•	•	•	•	•
ELECTRICAL SUPPLY	1/230/50 Hz	•	•	•			
	1/220-230/60Hz	♦	•	•			
	3/230-400/50Hz		♦	•	•	•	•
AUXILIARY	3/208-230/380-460/60 Hz		♦	♦	♦	♦	♦
	230/50-60 Hz	•	•	•	•	•	•
CONFIGURATION	110/50-60 Hz	♦	♦	♦	♦	♦	♦
	L1 - Angle configuration with combustion head developed in horizontal in primary air duct	•	•	•	•	•	•
	L2 - Angle configuration with combustion head developed in vertical in primary air duct	♦	♦	♦	♦	♦	♦
OPERATION	Fixed Air	•	•	•	•	•	•
	Air adjustment with mechanical cam		•	•	•	•	

- Standard
- ♦ On Demand

Gas Train Matchings

FUEL	RS 5 VA		RS 28 VA RS 28/M VA		RS 38 VA RS 38/M VA	
	Model	Max Output (kW)	Model	Max Output (kW)	Model	Max Output (kW)
Natural gas G20 at 25 mbar	MBDLE 412	180	MBDLE 420	230	MBDLE 420	280
Natural gas G20 at 300 mbar	MBDLE 407	180	MBDLE 407	270	MBDLE 407	360
LPG at 35 mbar	MBDLE 407	180	MBDLE 415	270	MBDLE 420	350
LPG at 150 mbar	MBDLE 407	180	MBDLE 405	270	MBDLE 405	360

FUEL	RS 50 VA RS 50/M VA		RS 70 VA RS 70/M VA		RS 100 VA	
	Model	Max Output (kW)	Model	Max Output (kW)	Model	Max Output (kW)
Natural gas G20 at 25 mbar	MBDLE 420	450	MBDLE 420	650	/	/
Natural gas G20 at 300 mbar	MBDLE 410	530	MBDLE 412	720	MBDLE 415	900
LPG at 35 mbar	MBDLE 415	530	MBDLE 412	700	MBDLE 420	850
LPG at 150 mbar	MBDLE 407	530	MBDLE 410	720	MBDLE 412	900

Max counter-pressure of 2 mbar
 Standard gas train electrical supply: 230V-50Hz - 200V/60Hz
 Natural Gas G20 Net Calorific Value: 10 kWh/Nm³; Gas density G20: 0.71 kg/Nm³
 LPG Net Calorific Value: 25.6 kWh/Nm³; Gas density G31: 1.99 kg/Nm³

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

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Across the world, Riello sets the standard in reliable and high efficiency burner technology.

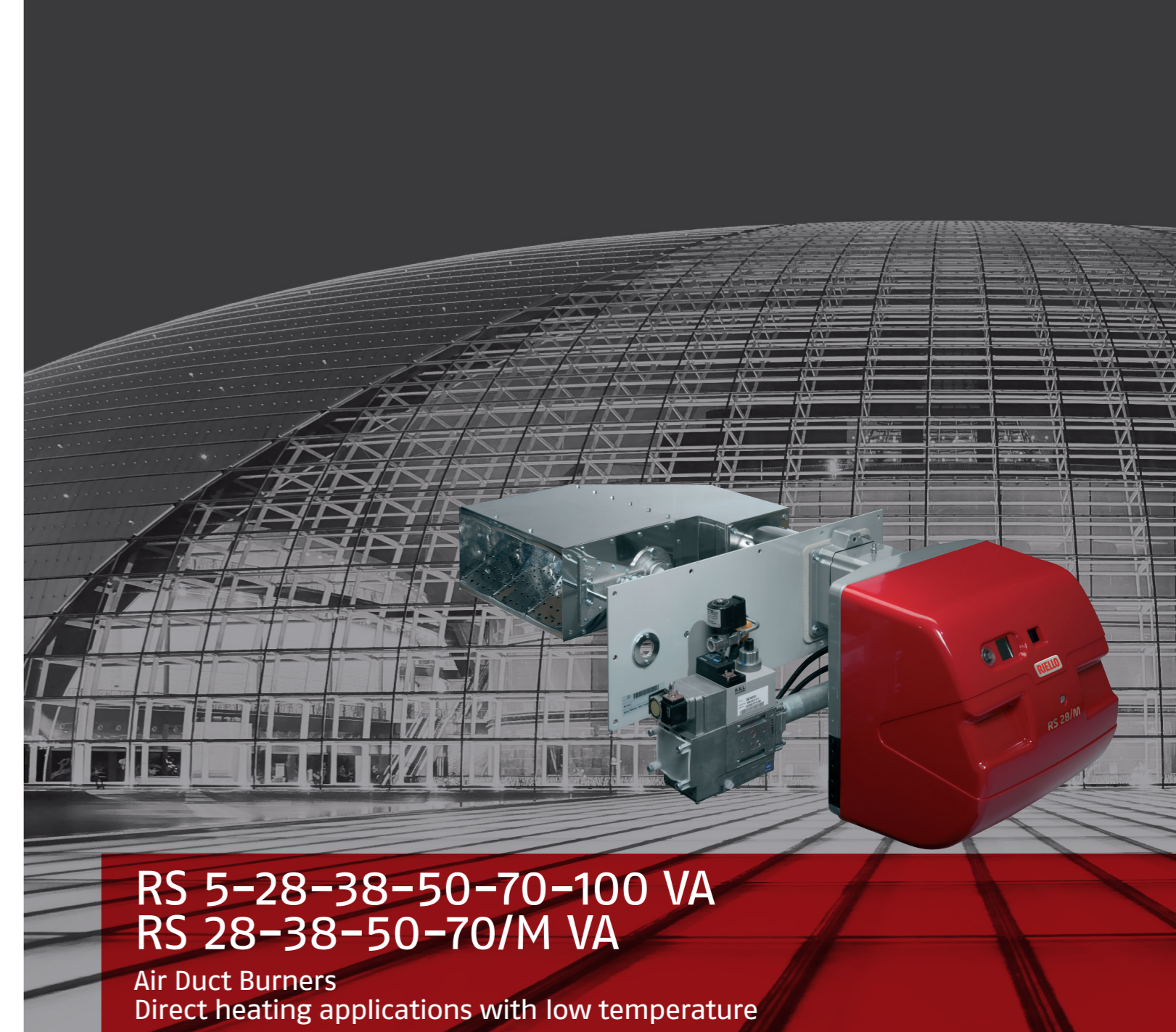
With burner capacity from 5 kW to 48 MW, Riello gas, oil, dual fuel and Low NOx burners deliver unbeatable performance across the full range of residential and commercial heating applications, as well as in industrial processes.

With headquarter in Legnago, Italy, Riello has been manufacturing premium quality burners for over 90 years. 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 17 operational branches abroad (in Europe, America and Asia), with customers in over 60 countries.

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RS 28-38-50-70/M VA

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Product Overview