



LOW NO_x MODULATING GAS BURNERS

▶ RS/E – RS/EV BLU SERIES

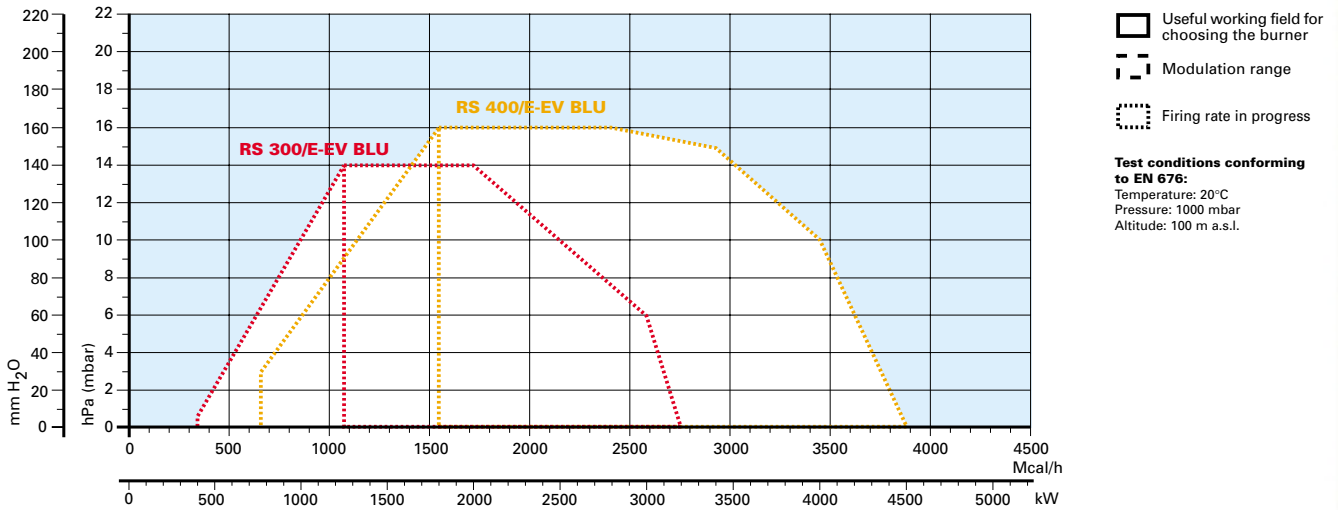
▶ RS 300/E BLU	500/1350 ÷ 3800 kW
▶ RS 400/E BLU	800/1800 ÷ 4500 kW
▶ RS 300/EV BLU	500/1350 ÷ 3800 kW
▶ RS 400/EV BLU	800/1800 ÷ 4500 kW



The RS/E and RS/EV series burners are characterised by a modular monoblock structure that means all necessary components can be combined in a single unit thus making installation easier, faster and, above all, more flexible. The series covers a firing range from 1350 to 4500 kW, and they have been designed for use in hot water boilers or industrial steam generators. Operation can be “two stage progressive” or alternative “modulating” with the installation of a PID logic regulator on the RS/E series burners while RS/EV series is fully “modulating”. The mechanisms of regulation allow to catch up a high modulation ratio on all firing rates range.

The burner can, therefore, supply with precision the demanded power, guaranteeing an high efficiency system level and the stability setting, obtaining fuel consumption and operating costs reduction. The innovative combustion head, adjustment system ensures perfect movement during modulation as well as reducing noise and pollutants.

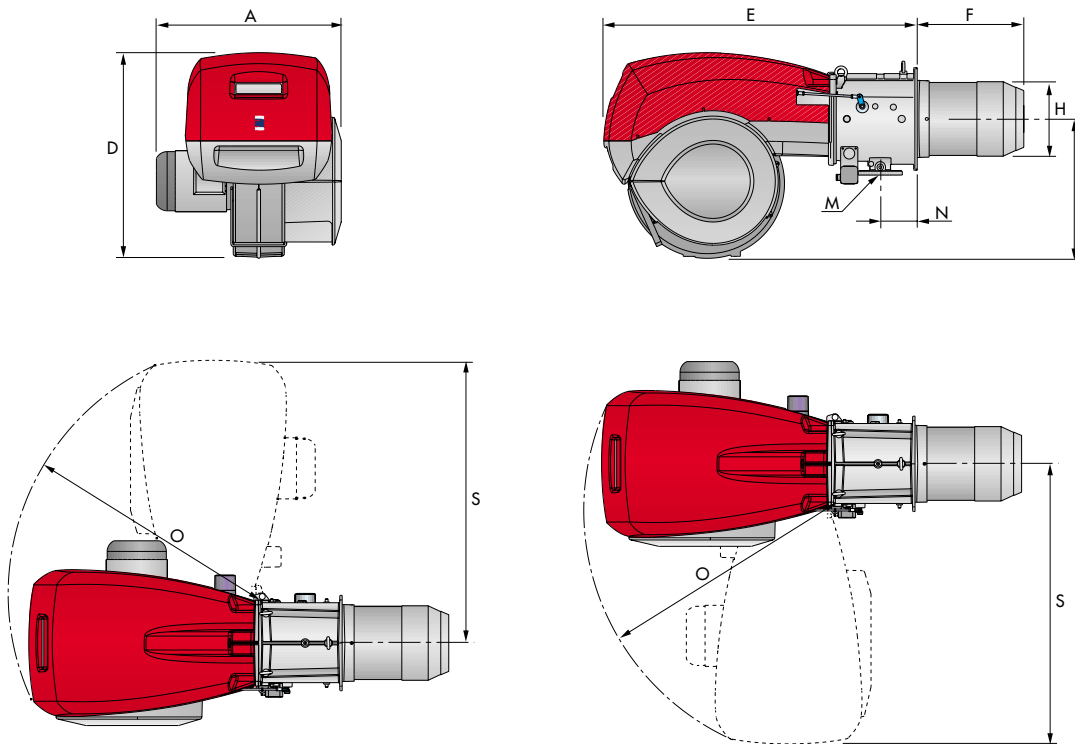
FIRING RATES



RS/E-EV BLU series - OVERALL DIMENSIONS (mm)

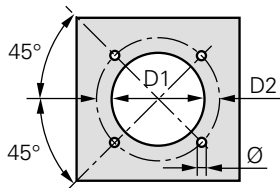
BURNER

RS 300-400/E - EV BLU



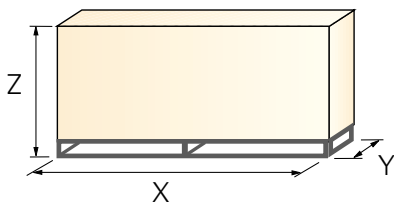
Model	A	D	E	F	H	I	M	N	O	S
▶ RS 300/E - EV BLU	720	862	1322	521	312	581	DN65	160	1054	1181
▶ RS 400/E - EV BLU	775	862	1322	521	312	581	DN65	160	1054	1181

BURNER - BOILER MOUNTING FLANGE



Model	D1	D2	Ø
▶ RS 300/E - EV BLU	325	453	M20
▶ RS 400/E - EV BLU	325	453	M20

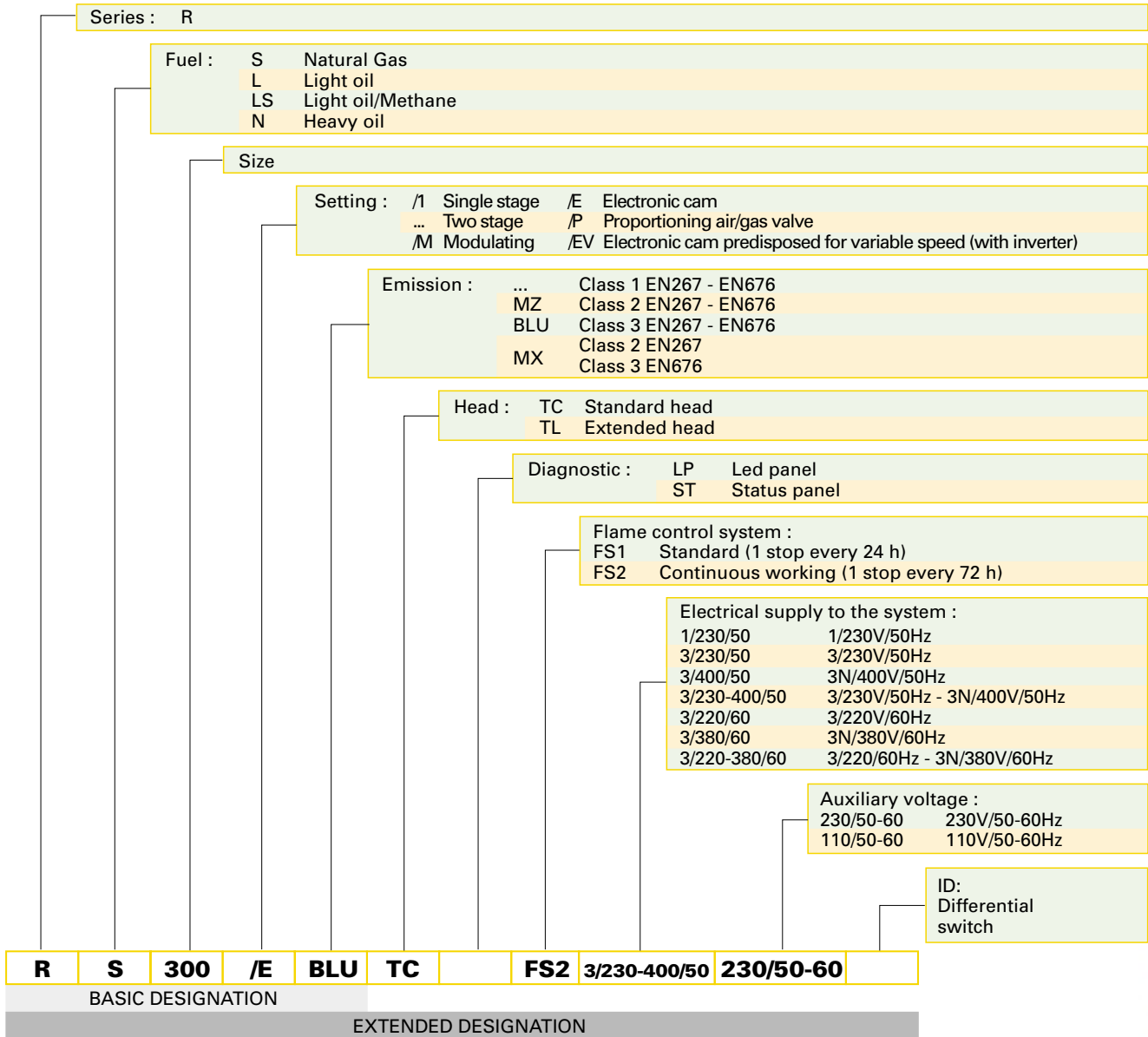
PACKAGING



Model	X	Y	Z	kg
▶ RS 300/E - EV BLU	2100	1200	1000	225
▶ RS 400/E - EV BLU	2100	1200	1000	236

RS/E-EV BLU series - SPECIFICATION

DESIGNATION OF SERIES



RS/E-EV BLU series - STATE OF SUPPLY

Monoblock forced draught gas burner with modulating operation, fully automatic, made up of:

- Fan with reverse curve blades high performance with low sound emissions
- Air suction circuit lined with sound-proofing material
- Air damper for air setting controlled by a high precision servomotor
- Air pressure switch
- Fan starting motor at 2900 rpm, three-phase 230/400 - 400/690 V with neutral, 50Hz
- Low emission mobile combustion head, that can be set on the basis of required output, fitted with:
 - stainless steel end cone, resistant to corrosion and high temperatures
 - ignition electrodes
 - flame stability disk
- Automatic regulator for gas delivery, controlled by a high precision servomotor
- Maximum gas pressure switch, with pressure test point, for halting the burner in the case of over pressure on the fuel supply line
- Module for air/fuel setting and output modulation with separated PID control of temperature or pressure, available as accessory for RS/E BLU model
- Module for air/fuel setting and output modulation with incorporated PID control of temperature or pressure of the heat generator (RS/EV BLU)
- Flame control panel for controlling the system safety
- Ionization probe for flame detector / Infrared flame detector
- Star/triangle starter for the fan motor (version with motor electrical power 7,5 kW)
- Main electrical supply terminal board
- Burner on/off switch
- Auxiliary voltage led signal
- Manual or automatic output increase/decrease switch
- Burner working led signal
- Contacts motor and thermal relay with release button
- Motor internal thermal protection
- Motor failure led signal
- Burner failure led signal and lighted release button
- Emergency button
- Coded connection plugs-sockets
- Burner opening hinge
- Lifting rings
- IP 54 electric protection level.

Standard equipment:

- 1 flange gasket
- 4 screws for fixing the flange
- 1 thermal screen
- 4 screws for fixing the burner flange to the boiler
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

RS/E-EV BLU series - AVAILABLE BURNER MODELS

Code	Model				Heat output		Total electrical power (kW)	Certification	Note	Price
					(kW)	Natural Gas (Nm ³ /h)				
3898330	RS 300/E BLU	TC	FS1 3/230-400/50	230/50-60	400/1250-3200	50/130-320		in progress		
3898331	RS 300/E BLU	TL	FS1 3/230-400/50	230/50-60	400/1250-3200	50/130-320		in progress		
3898430	RS 400/E BLU	TC	FS1 3/230/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898431	RS 400/E BLU	TL	FS1 3/230/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898432	RS 400/E BLU	TC	FS1 3/400/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898433	RS 400/E BLU	TL	FS1 3/400/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898350	RS 300/EV BLU	TC	FS1 3/230-400/50	230/50-60	400/1250-3200	50/130-320		in progress		
3898351	RS 300/EV BLU	TL	FS1 3/230-400/50	230/50-60	400/1250-3200	50/130-320		in progress		
3898450	RS 400/EV BLU	TC	FS1 3/230/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898451	RS 400/EV BLU	TL	FS1 3/230/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898452	RS 400/EV BLU	TC	FS1 3/400/50	230/50-60	750/1800-4500	72/200-450		in progress		
3898453	RS 400/EV BLU	TL	FS1 3/400/50	230/50-60	750/1800-4500	72/200-450		in progress		

Natural gas, net calorific value: 10 kWh/Nm³ - Density: 0,71 kg/Nm³

The burners of RS/E-EV BLU series are in according to 90/396 - 89/336 - 73/23 EEC Directives.

RS/E-EV BLU series - AVAILABLE GAS TRAIN MODELS

Gas train code*	Gas train model	Natural gas		Note	Gas train price
		Burner (type)	Adapter ** (code)		
COMPOSED GAS TRAIN	3970147	CBF 65/1	RS 300/E-EV RS 400/E-EV	In progress	(1)
	3970148	CBF 80/1	RS 300/E-EV RS 400/E-EV	In progress	(1)
	3970149	CBF 100/1	RS 400/E-EV	In progress	(1)

* gas train are 230V/50Hz - 220V/60Hz electrical supply

** the adapter price is available in the "Gas train accessories" section

(1) Seal control included in burner functions.

The following table shows the frequently matching between RS/E-EV BLU burners and the gas train, referred to different inlet gas pressure.

Burner	Reference combustion chamber pressure (mbar)	Natural gas G20 (20 mbar)		Natural gas G20 (300 mbar)		LPG (35 mbar)		LPG (150 mbar)	
		Gas train	Reference output (kW)	Gas train	Reference output (kW)	Gas train	Reference output (kW)	Gas train	Reference output (kW)
RS 300/E-EV	8			In progress	2700				
RS 400/E-EV	11			CBF 65/1	3800				

RS/E-EV BLU series - BURNER ACCESSORIES

Accessories for modulating operation



To obtain modulating operation, the RS/E BLU series of burners requires a regulator.

Burner	Regulator type	Regulator code	Price
RS 300/400 E BLU RWF 40	Basic version with 3 position output	3010356	
RS 300/400 E BLU RWF 40	High version with additional modulating output and RS 485 Interface	3010357	



The relative temperature or pressure probes fitted to the regulator, must be chosen on the basis of the application.

Burner	Probe type (LMV 51)	Range (°C) (bar)	Probe code	Price
RS 300/400 E-EV BLU	Temperature PT 100	-100 ÷ 500°C	3010110	
RS 300/400 E-EV BLU	Pressure 4 ÷ 20 mA	0 ÷ 2,5 bar	3010213	
RS 300/400 E-EV BLU	Pressure 4 ÷ 20 mA	0 ÷ 16 bar	3010214	

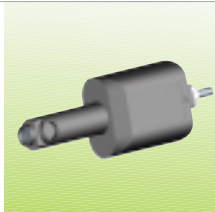
Display and Operating Unit (AZL51)



This tool is needed for combustion system commissioning and monitoring.

Burner	Code	Price
RS 300/400 E BLU	3010355	

Continuous Operation Infrared Flame Detector (IFD)



For the supervision of gas, oil or other flame that emit infrared radiation, the RS/E-EV BLU series of burners requires the infrared flame detector.

The infrared flame detector are suited for burners of any capacity, either in continuous or intermittent operation.

Burner	Code	Price
RS 300/400 E-EV BLU	3010359	

RS/E-EV BLU series - BURNER ACCESSORIES

Variable Speed Drive (VSD)



The motor speed variation for the RS/EV BLU burners series is obtained thanks to a frequency converter: variable speed drive (VSD).

Burner	Code	Price
RS 300/400 EV BLU	in progress	

Oxygen Control kit (QGO₂)



The QGO₂ is an oxygen analyzer with relevant probe which controls and supervises the residual oxygen content in exhaust gases.

Burner	Code	Price
RS 300/400 EV BLU	in progress	

PC Interface Software (ACS 450)

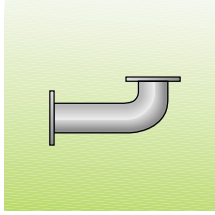


PC tool for convenient programming and burner settings, process visualization, data recording, selection of AZL 51 language, software update AZL 51.

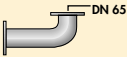


Burner	Code	Price
RS 300/400 E-EV BLU	in progress	

RS/E-EV BLU series - GAS TRAIN ACCESSORIES

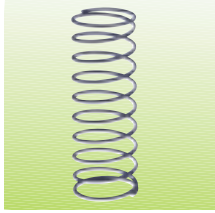
Adapters



Below are given the adapters than can be fitted on the various burners:

Burner	Gas train	Adapter type	Dimensions	Adapter code	Price
RS 300/400 E - EV BLU	CBF 65/1	L	DN 65 	in progress	
	CBF 80/1	L	DN 80 	in progress	
	CBF 100/1	L	DN 100 	in progress	

Stabiliser spring



To vary the pressure range of the gas train stabilisers, accessory springs are available. The following table shows these accessories with their application range:

Gas train	Spring	Spring code	Price
CBF 65/1 - 80/1	Red from 25 to 55 mbar	3010133	
CBF 100/1	Red from 25 to 55 mbar	3010134	
CBF 65/1 - 80/1	Black from 60 to 110 mbar	3010135	
CBF 100/1	Black from 60 to 110 mbar	3010136	
CBF 65/1 - 80/1	Pink from 90 to 150 mbar	3090456	
CBF 100/1	Pink from 90 to 150 mbar	3090489	

Pressure switch kit



To test the valve seal on the gas train.

Burner	Type	Kit code	Price
RS 300/400 EV BLU	PLD	3010344	