

RS/P BLU SERIES

RS/P series burners are characterised by a modular monoblock structure which means that 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. Using a particular proportioning valve the burner keeps desired air to gas ratio in every working condition.

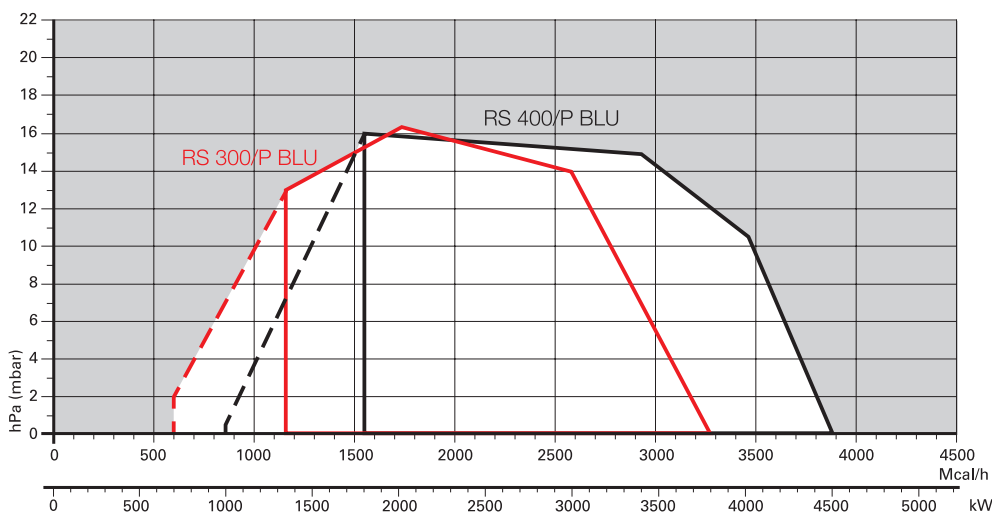
The burner can, also, supply with precision the demanded power, guaranteeing an high efficiency system level and the stability setting, obtaining fuel consumption and operating costs reduction.

The innovative combustion head ensures reducing noise and pollutants.



RS 300/P BLU	500/1350 ÷ 3800 kW
RS 400/P BLU	800/1800 ÷ 4500 kW

FIRING RATES



Useful working field for choosing the burner

Modulation range

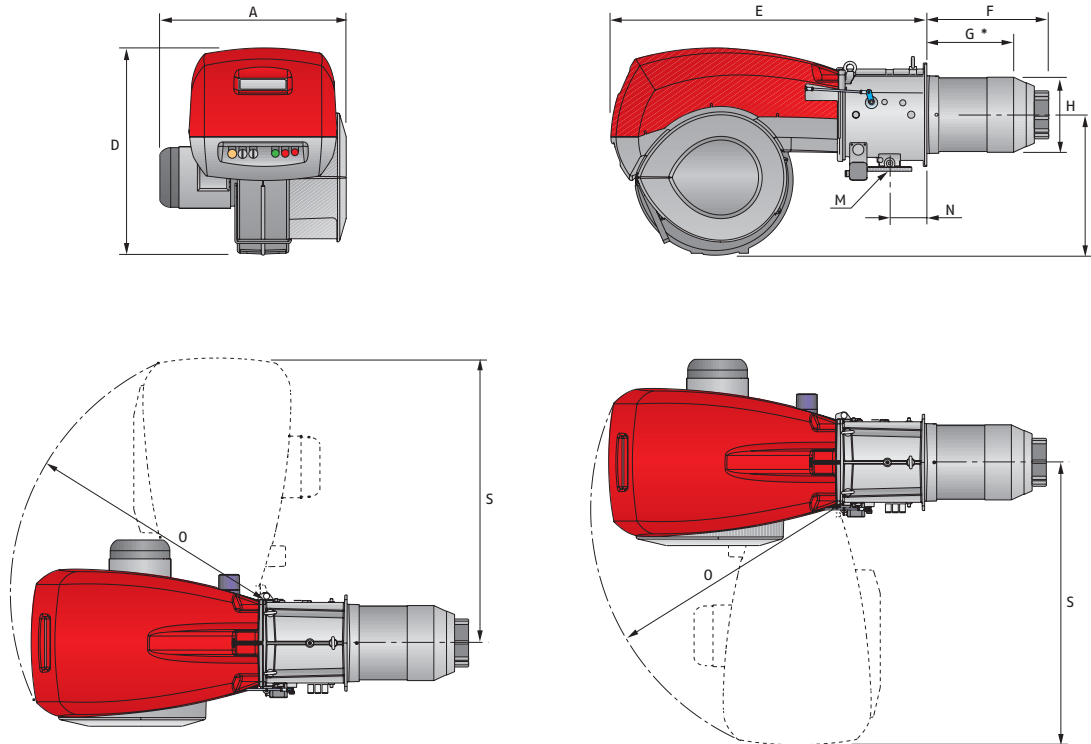
Test conditions conforming to EN676
 Temperature: 20°C
 Pressure: 1013,5 mbar
 Altitude: 0 m a.s.l.

Low NOx Modulating Gas Burners

RS/P BLU SERIES

Overall dimensions (mm)

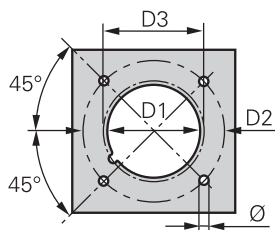
BURNER



MODEL	A	D	E	F	G*	H	I	M	N	O	S
▶ RS 300/P BLU	720	867	1325	521	373	313	588	DN80	164	1055	1175
▶ RS 400/P BLU	775	867	1325	521	373	313	588	DN80	164	1055	1175

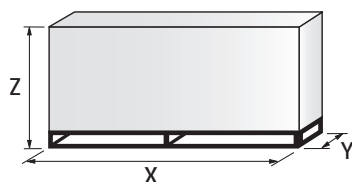
* Maximum depth of the boiler door including the depth of the burner flange insulating gasket.

BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	D3	Ø
▶ RS 300/P BLU	350	452	372	M18
▶ RS 400/P BLU	350	452	372	M18

PACKAGING

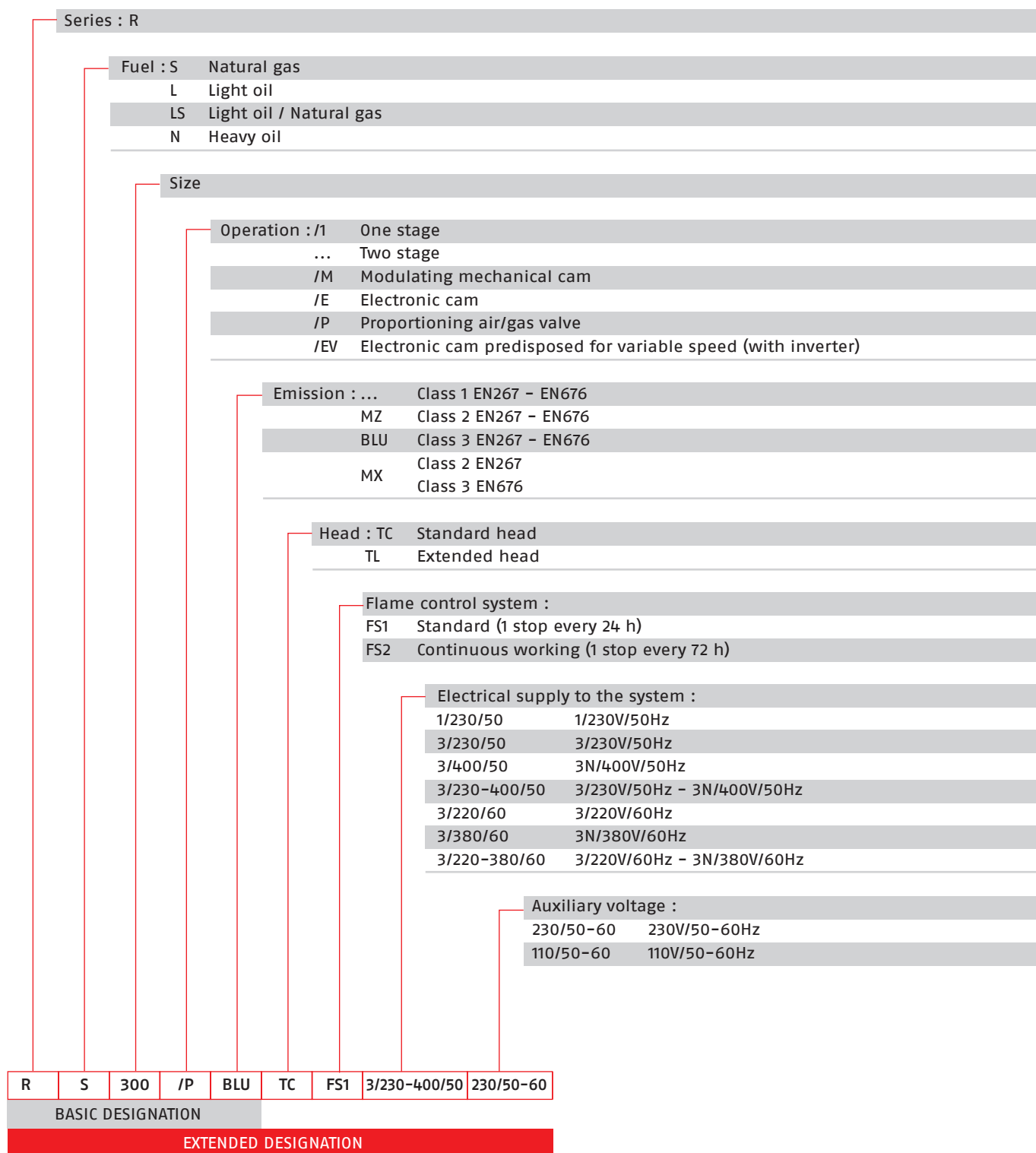


MODEL	X	Y	Z	kg
▶ RS 300/P BLU	1960	945	1100	225
▶ RS 400/P BLU	1960	945	1100	236

RS/P BLU SERIES

Specification

DESIGNATION OF SERIES



LOW NOx GAS

Specification

STATE OF SUPPLY

Monoblock forced draught gas burner with two stage 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 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
- Proportional air/gas valve
- 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
- Microprocessor-based burner safety control box, with diagnostic functions
- Ionization probe for flame detector
- Star/delta 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/P BLU SERIES

Available models

Burners

CODE	MODEL			HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
				NATURAL GAS (kW)	NATURAL GAS (Nm ³ /h)			
3898310	RS 300/P BLU	TC FS1 3/230-400/50	230/50-60	700/1350-3800	70/135-380	6	CE 0085B00341	
20006127	RS 300/P BLU	TC FS1 3/220-380/60	220/50-60	700/1350-3800	70/135-380	6	-	
3898410	RS 400/P BLU	TC FS1 3/230/50	230/50-60	1000/1800-4500	100/180-450	9	CE 0085B00341	
3898412	RS 400/P BLU	TC FS1 3/400/50	230/50-60	1000/1800-4500	100/180-450	9	CE 0085B00341	
20006130	RS 400/P BLU	TC FS1 3/380/60	220/50-60	1000/1800-4500	100/180-450	9	-	

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

The burners of RS/P BLU series are in according to 2009/142 - 2004/108 - 2006/95 - 2006/42 EC Directives.

Gas Trains

COMPOSED GAS TRAIN	Code	Gas train Model		VPS Code	Adapter Code	NOTE
			∅			
	3970215*	VDG 50/P - FT 02	DN 80	3010367	3010222 + 20059331 / (20065937 + 20059331)	(1)
	3970212*	VDG 65/P - FT 02	DN 80	3010367		(1)
	3970213*	VDG 80/P - FT 02	DN 80	3010367		(1)
	3970214*	VDG 100/P - FT 02	DN 80	3010367		(1)

Please see Designation of Gas Train Series in the page before the Catalogue index.

* Gas trains are 230V/50Hz - 220V/60Hz electrical supply.

** See adapter length on "Gas trains accessories" paragraph.

(1) To be used with gas train and burner opening on the left (fan motor side)

VPS Valve leak detection control device. Supplied separately from the gas train (please see Gas train accessories paragraph for both 50 Hz and 60Hz codes).

The valve seal control device is compulsory (conforming to EN 676) on gas trains to burners with a maximum output over 1200 kW.

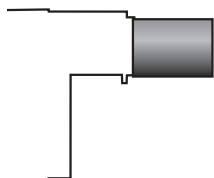
To select the gas train please refer to the technical data leaflet and/or instruction manual.

Low NOx Modulating Gas Burners

RS/P BLU SERIES

Burner accessories

Extended head kit



“Standard head” burners can be transformed into “extended head” versions, by using the special kit. The KITS available for the various burners, giving the original and the extended lengths, are listed below.

BURNER	STANDARD HEAD LENGTH (mm)	EXTENDED HEAD LENGTH (mm)	KIT CODE
▶ RS 300-400/P BLU	521 (1) - 373 (2)	621 (1) - 473 (2)	3091427
▶ RS 300-400/P BLU	521 (1) - 373 (2)	671 (1) - 523 (2)	3091919
▶ RS 300-400/P BLU	521 (1) - 373 (2)	721 (1) - 573 (2)	20022815

(1) referred to quote F
(2) referred to quote G

Accessories for modulating operation



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

BURNER	REGULATOR TYPE	REGULATOR CODE
▶ RS 300-400/P BLU	RWF 40 Basic version with 3 position output	3010356
▶ RS 300-400/P 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	RANGE (°C) (bar)	PROBE CODE
▶ RS 300-400/P BLU	Temperature PT 100	-100 ÷ 500°C	3010110
▶ RS 300-400/P BLU	Pressure 4 ÷ 20 mA	0 ÷ 2,5 bar	3010213
▶ RS 300-400/P BLU	Pressure 4 ÷ 20 mA	0 ÷ 16 bar	3010214
▶ RS 300-400/P BLU	Pressure 4 ÷ 20 mA	0 ÷ 25 bar	3090873

Analogic control signal converter



BURNER	TYPE (INPUT SIGNAL)	CODE
▶ RS 300-400/P BLU	0/2 - 10 V (impedance 200 KΩ) 0/4 - 20 mA (impedance 250 Ω)	3010390

Burner accessories

Potentiometer



BURNER	CODE
▶ RS 300-400/P BLU	3010393

It is necessary for analog control signal converter operation.

Continuous ventilation kit



If the burner requires continuous ventilation in the stages without flame, a special kit is available as given in the following table.

BURNER	KIT CODE
▶ RS 300-400/P BLU	3010094

LPG kit



For burning LPG gas, a special kit is available to be fitted to the combustion head on the burner.

BURNER	KIT CODE
▶ RS 300-400/P BLU	3010445

UV cell kit



A UV cell is available for the supervision of the flame alternatively to ionization probe for special applications.

BURNER	KIT CODE
▶ RS 300-400/P BLU	3010359

PC Interface kit



To connect the control box to a personal computer for the transmission of operation, fault signals and detailed service information, an interface adapter with PC software are available.

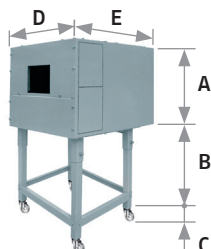
BURNER	KIT CODE
▶ RS 300-400/P BLU	3002719

Low NOx Modulating Gas Burners

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Burner accessories

Sound proofing box

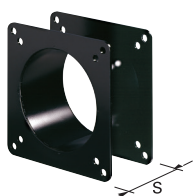


If noise emission needs reducing even further, sound-proofing boxes are available. In case of generator heights, where a lower dimension "B" is required, ask for the Box Support Kit code 20065135. The useful dimensions are 40 mm less than the total dimensions indicated in the table (A, D, E). Not suitable for outdoor use.

BURNER	BOX TYPE	A (mm)	B (mm) min-max	C (mm)	D (mm)	E (mm)	[dB(A)] (*)	BOX CODE
► RS 300-400/P BLU	C7	1255	160 - 980	110	1140	1345	10	3010376

(*) Average noise reduction according to EN 15036-1 standard

Spacer kit



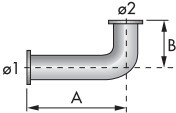
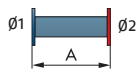
If burner head penetration into the combustion chamber needs reducing, varying thickness spacers are available, as given in the following table:

BURNER	SPACER THICKNESS S (mm)	KIT CODE
► RS 300-400/P BLU	180	20008903

Gas train accessories

Adapters

In certain cases, an adapter must be fitted between the gas train and the burner, when the diameter of the gas train is different from the set diameter of the burner. Below are given the available adapters; please see on the Gas Train list the correct adapter codes to select.

ADAPTER	DIMENSIONS				ADAPTER CODE
	Ø1 DN	Ø2 DN	A mm	B mm	
	80	65 / 80	230	230	20059331
	80	80	400	-	3010222
	80	80	800	-	20065937

Seal control kit



To test the valve seals on the gas train, a special "seal control kit" is available. The valve seal control device is compulsory (EN 676) on gas trains to burners with a maximum output over 1200 kW.

GAS TRAIN	KIT CODE for 50 Hz operation	KIT CODE for 60 Hz operation
► VGD type	3010367	20050030