

GULLIVER BS SERIES

The Riello Gulliver BS series of one stage gas burners, is a complete range of Low NOx emission products, developed to respond to any request for home heating, conforming to the most severe standards regarding the reduction of polluting emissions.

This series of burners is available in four different models with an output ranging from 16 to 250 kW, divided in four different structures.

All the models use the same components designed by Riello for the Gulliver series. The high quality level guarantees safe working. The burners are fitted with a microprocessor-based burner safety control box which supplies indication of operation and diagnosis of fault cause.

In developing these burners, special attention was paid to reducing noise, the ease of installation and adjustment, to obtaining the smallest size possible to fit into any sort of boiler available on the market.

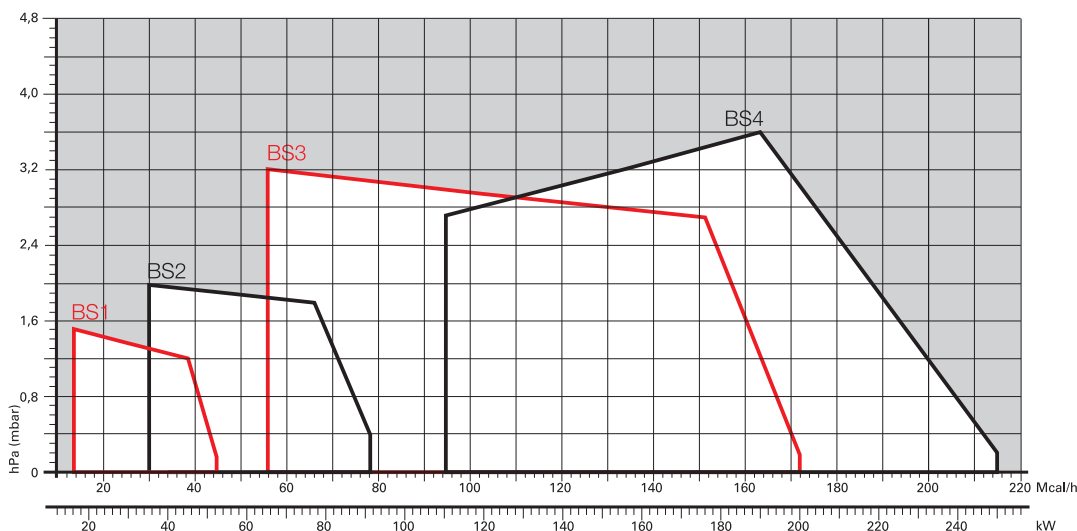
All the models are approved by the EN 676 European Standard and conform to European Directives, Gas Appliance, EMC, Low Voltage, Boiler Efficiency.

All the Gulliver BS burners are tested before leaving the factory.



BS1	16 ÷ 52	kW
BS2	35 ÷ 91	kW
BS3	65 ÷ 200	kW
BS4	110 ÷ 250	kW

FIRING RATES

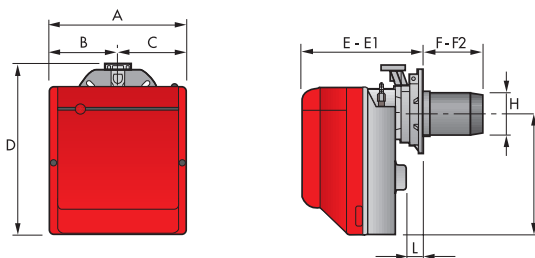


Low NOx One Stage Gas Burners

GULLIVER BS SERIES

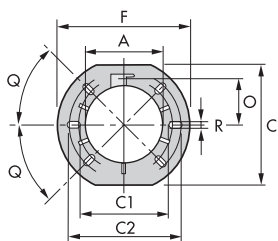
Overall dimensions (mm)

BURNER



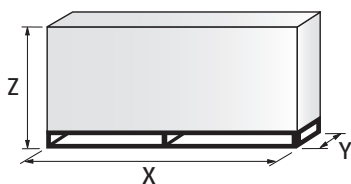
MODEL	A	B	C	D	E	E1	F	F2	H	I	L
▶ BS1	234	122	112	295	230	276	116	70	89	210	41
▶ BS2	255	125,5	125,5	325	238	252	114	100	106	230	45
▶ BS2 TL	255	125,5	125,5	325	238	252	184	170	106	230	45
▶ BS3	300	150	150	391	262	280	128	110	129	285	45
▶ BS3 TL	300	150	150	391	262	280	285	267	129	285	45
▶ BS4	300	150	150	392	278	301	168	145	137	286	45
▶ BS4 TL	300	150	150	392	278	301	325	302	137	286	45

BURNER - BOILER MOUNTING FLANGE



MODEL	A	C	C1	C2	F	O	Q	R
▶ BS1	89	167	140	170	192	66	45°	11
▶ BS2 - BS2 TL	106	167	140	170	192	66	45°	11
▶ BS3 - BS3 TL	129	201	160	190	216	76,5	45°	11
▶ BS4 - BS4 TL	137	203	170	200	218	80,5	45°	11

PACKAGING

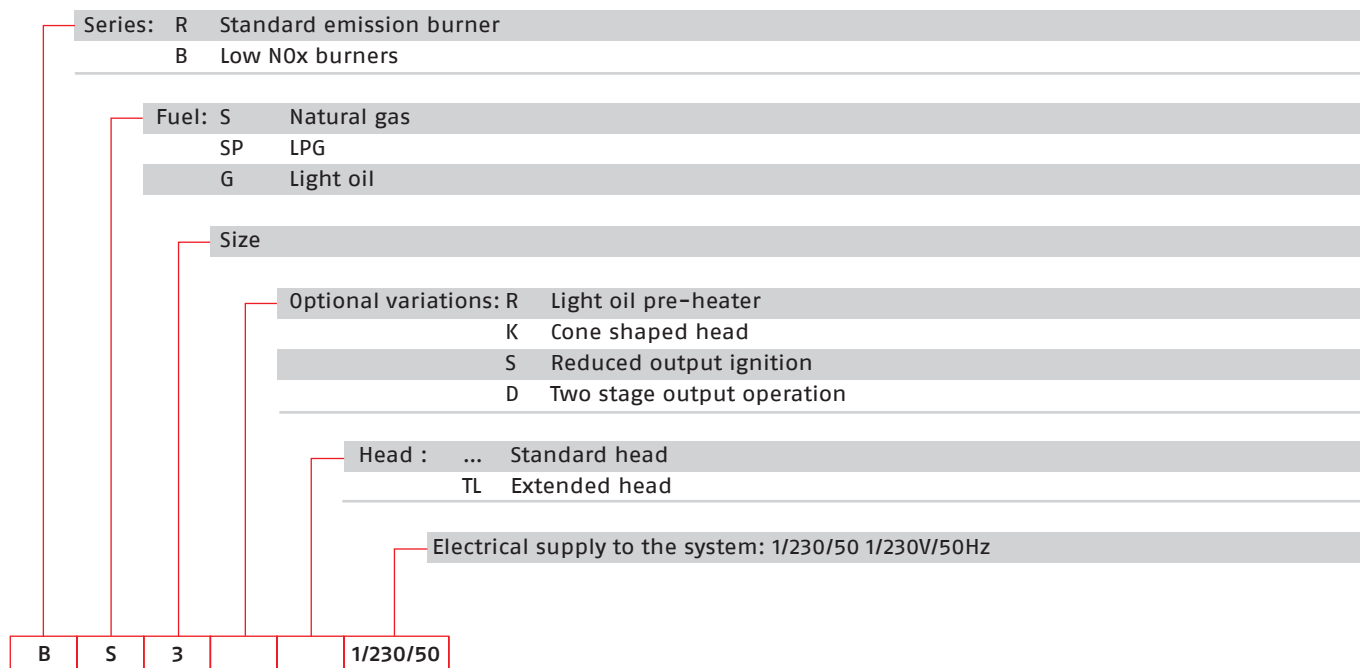


MODEL	X	Y	Z	kg
BS1	395	278	350	10
BS2	405	298	375	11
BS2 TL	583	290	370	11 - 13
BS3	450	345	440	15
BS3 TL	703	335	435	15 - 17
BS4	510	345	440	16,5
BS4 TL	703	335	435	16,5 - 18,5

GULLIVER BS SERIES

Specification

DESIGNATION OF SERIES



STATE OF SUPPLY

Monoblock, gas burners, completely automatic, one stage operation, made up of:

- Fan with forward curve blades
- Cover lined with sound-proofing material
- Air damper, completely closed in stand by, with external adjustment, with no need to remove the cover
- Single phase electric motor 230 V, 50 Hz
- Combustion head fitted with:
 - stainless steel head cone, resistant to high temperatures
 - ignition electrodes
 - ionisation probe
 - gas distributor
 - flame stability disk
- Flame inspection window
- Adjustable air pressure switch, with graduated selector, to guarantee burner lock out in the case of insufficient combustible air
- Microprocessor-based burner safety control box, with diagnostic and remote reset functions
- Protection filter against radio interference (included into burner safety control box)
- IP X0D (IP 40) electric protection level.

Standard equipment:

- Sliding flange
- Flange insulation screen
- Screws and nuts for fixing the flange to the boiler
- 7-pin plug
- Remote control release kit
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

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Available models

Burners

CODE	MODEL	HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
		(kW)	NATURAL GAS (Nm ³ /h)			
3761158	BS1 1/230/50	16 - 52	1,6 - 5,2	0,150	CE - 0085 AQ0409	(1)
3761258	BS2 1/230/50	35 - 91	3,5 - 9,1	0,180	CE - 0085 AQ0409	(1)
20052601	BS2 TL 1/230/50	35 - 91	3,5 - 9,1	0,180	CE - 0085 AQ0409	(1)
3761358	BS3 1/230/50	65 - 200	6,5 - 20	0,350	CE - 0085 AQ0409	(1)
20052611	BS3 TL 1/230/50	65 - 200	6,5 - 20	0,350	CE - 0085 AQ0409	(1)
3761458	BS4 1/230/50	110 - 250	11 - 25	0,530	CE - 0085 AQ0409	(1)
20052612	BS4 TL 1/230/50	110 - 250	11 - 25	0,530	CE - 0085 AQ0409	(1)

Net calorific value G20: 10 kWh/Nm³ - Density: 0,71 kg/Nm³.
The burners of BS series are in according to EN 676.
(1) With plug and socket.

Gas Trains

	GAS TRAIN		NATURAL GAS		LPG		NOTE
	CODE *	MODEL	BURNER (type)	ADAPTER (code)	BURNER (type)	ADAPTER (code)	
MULTIBLOC	3970570	MBC 65/1 - F1SD 20	BS1		BS1		(1)
	3970546	MB 405/1 - F1SD 20	BS1		BS1		(1)
	3970547	MB 405/1 - F2SD 20	BS2		BS2		(1)
	3970544	MB 407/1 - F2SD 20	BS2		BS2		(1)
	3970548	MB 407/1 - F3SD 20	BS3 - BS4		BS3 - BS4		(1)
	3970549	MB 410/1 - F3SD 20	BS3 - BS4		BS3 - BS4		(1)
	3970550	MB 412/1 - F3SD 20	BS3 - BS4		BS3 - BS4		(1)

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

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

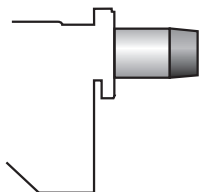
(1) With installed plug.

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.

Burner accessories

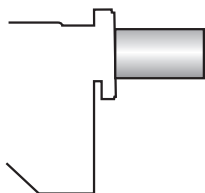
Extended head kit



Burners standard head can be transformed into "extended head" versions by using the special kit. Here the KITS available for the various burners are listed, showing the original and the extended lengths.

BURNER	STANDARD HEAD LENGTH (mm)	EXTENDED HEAD LENGTH (mm)	KIT CODE
▶ BS1	70 ÷ 116	70 ÷ 160	20031875
▶ BS2 (long)	100 ÷ 114	170 ÷ 180	3001007
▶ BS2 (extra long)	100 ÷ 114	270 ÷ 280	3001008
▶ BS3	110 ÷ 128	267 ÷ 282	3001009
▶ BS4	145 ÷ 168	302 ÷ 317	3001016

Alternative combustion head kit



This kit can be used to prevent combustion instability which could arise with particular heat generators.

To extend the adaptability of Gulliver BS burners to any sort of application, alternative combustion heads have been developed.

These heads cause a very limited increase in NOx emissions, due to the slower air flow.

BURNER	KIT CODE
▶ BS1	3001059
▶ BS2	3001064
▶ BS3	3001060
▶ BS4	3001070

LPG kit



For burning LPG gas, a special kit is available to be fitted to the combustion head on the burner, as shown in the following table.

BURNER	KIT CODE FOR STANDARD HEAD	KIT CODE (*)	KIT CODE FOR EXTENDED HEAD
▶ BS1	3001003	3002734	3001003
▶ BS2	3001004	3002735	3001004
▶ BS3	3001005	3002736	3001005
▶ BS4	3001011	3002737	3001011

(*) CE certification in progress

Town Gas kit



For burning Town Gas, a special kit is available to be fitted to the combustion head on the burner, as shown in the following table.

BURNER	KIT CODE FOR STANDARD HEAD (*)	KIT CODE FOR EXTENDED HEAD (*)
▶ BS1	3002727	-
▶ BS2	3002728	3002728
▶ BS3	3002729	3002729

(*) Without CE certification

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Burner accessories

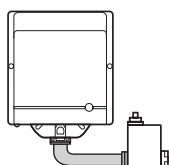
Ground fault interrupter kit



A "Ground fault interrupter kit" is available as a safety device in case of electrical system fault. It is supplied with burners with pin plug.

BURNER	KIT CODE
► BS1 - BS2 - BS3 - BS4	3001180

Multibloc rotation kit



There is a special kit available that can be used to install the burner turned 180°. This kit is designed to ensure the gas train valve properly.

BURNER	KIT CODE
► BS1	3001179
► BS2	3001177
► BS3 - BS4	3001178

7-pin plug kit

If necessary a 7-pin plug kit is available (in packaging of n. 5 pieces).

BURNER	KIT CODE
► BS1 - BS2 - BS3 - BS4	3000945

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
► BS1 - BS2 - BS3 - BS4	3002731

Gas train accessories

Seal control kit



To test the valve seals on the gas train, (except for the model with Multibloc MBC 65 DLE) a special "seal control kit" is available.

GAS TRAIN	KIT CODE for 50 Hz operation	KIT CODE for 60 Hz operation
► MB/1 type	3010123	20050030