

RL/M BLU SERIES

The RL/M BLU burners series covers a firing range from 360 to 1023 kW, and it has been designed for use in hot or superheated water boilers, hot air or steam generators and diathermic oil boilers.

Operation can be "two stage progressive" or, alternatively, "modulating" with the installation of a PID logic regulator and respective probes.

RL/M BLU burners series guarantees high efficiency levels in all applications, thus reducing fuel consumption and running costs.

Sound emissions optimisation is guaranteed by the use of fans with reverse curve blades and sound deadening material incorporated in the air suction circuit.

The exclusive design ensures reduced dimensions, simple use and maintenance. A wide range of accessories guarantees elevated working flexibility.

Guidelines for installation of burners in conformity to EU Regulation:

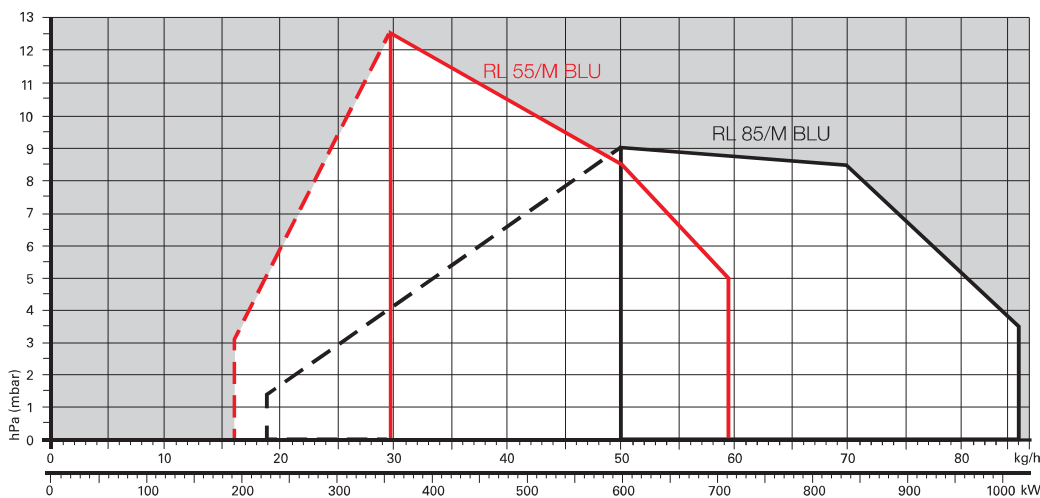
A RIELLO burner (Heat Generator), where it is matched with a water-based boiler (Heater Housing) with a nominal output ≤ 400 kW, providing heat for heating purposes and heat to deliver sanitary hot water, can be installed:


- With boilers (heater housings) already in service in the field, for replacement of identical products, in conformity to Article 1, paragraph 2, point (G) of the EU Regulation No. 813/2013;
- With boilers (heater housings) on a new installation, if they have emissions complying with the requirement of Annex II, paragraph 4 of the EU regulation No. 813/2013.



RL 55/M BLU	190/356 ÷	712 kW
RL 85/M BLU	223/594 ÷	1023 kW

FIRING RATES



 Useful working field for choosing the burner

 Modulation range

Test conditions conforming to EN267
 Temperature: 20°C
 Pressure: 1013,5 mbar
 Altitude: 0 m a.s.l.

NOTE: The RL 55-85/M BLU burners are designed exclusively for combustion chambers with flue gas outlet from the bottom, for example three flue gas passes (not reverse flame boilers) accessible through the door. Maximum thickness of the frontal boiler wall: 250 mm.

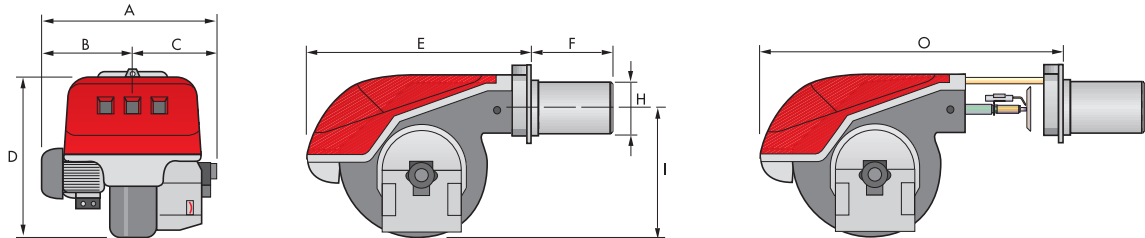
Exhaust gases ducts must be always and exclusively directed upwards; change in directions must be realized only by bent elements; the angle between the axis of the stroke coming out of the combustion chamber and the axis of the chimney must be smaller than 45°.

Low NOx Modulating Light Oil Burners

RL/M BLU SERIES

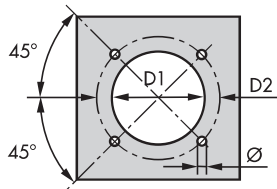
Overall dimensions (mm)

BURNER



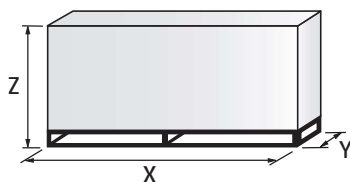
MODEL	A	B	C	D	E	F	H	I	O
▶ RL 55/M BLU	663	296	367	555	680	365	189	430	951
▶ RL 85/M BLU	705	338	367	555	680	365	189	430	951

BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	Ø
▶ RL 55/M BLU	195	275-325	M12
▶ RL 85/M BLU	195	275-325	M12

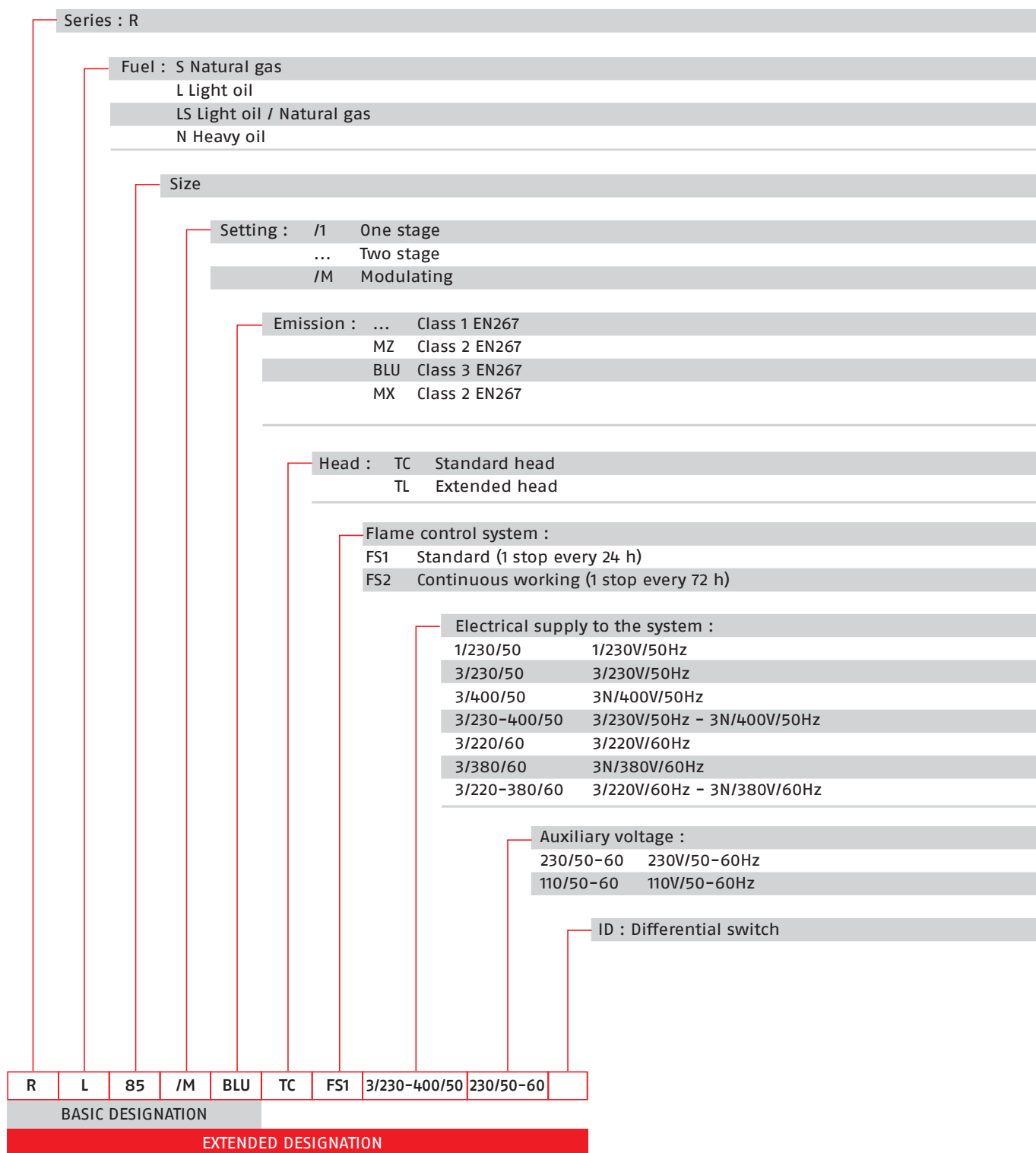
PACKAGING



MODEL	X	Y	Z	kg
▶ RL 55/M BLU	1270	745	885	65
▶ RL 85/M BLU	1270	745	885	70

Specification

DESIGNATION OF SERIES



Low NOx Modulating Light Oil Burners

RL/M BLU SERIES

Specification

STATE OF SUPPLY

Monoblock forced draught oil burner with two stage progressive or modulating setting, with a specific kit, fully automatic, made up of:

- air suction circuit lined with sound-proofing material
- fan with reverse curve blades high performance with low sound emissions
- air damper for air setting and automatic oil output regulator controlled by a servomotor with variable cam
- starting motor at 2800 rpm, three-phase 400V with neutral, 50Hz
- 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
- gears pump for high pressure fuel supply, fitted with:
 - filter
 - pressure regulator
- connections for installing a pressure gauge and vacuumeter
- internal by-pass for single pipe installation
- valve unit with a double oil safety valve on the output circuit and safety valve on the return circuit; double safety valve on the return circuit
- safety oil pressure switch for stop the burner in case of problems in the return circuit
- photocell for flame detection
- microprocessor-based burner safety control box, with diagnostic functions
- burner on/off switch
- flame inspection window
- manual or automatic output increase/decrease switch
- slide bars for easier installation and maintenance
- protection filter against radio interference
- IP 44 electric protection level.

Standard equipment:

- 2 flexible pipes for connection to the oil supply network
- 2 gaskets for the flexible pipes
- 2 nipples for connection to the pump
- 4 screws for fixing the burner flange to the boiler
- 1 thermal screen
- wiring loom fittings for electrical connections
- instruction handbook for installation, use and maintenance
- spare parts catalogue.

Available models

CODE	MODEL	HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	NOTE
		(kW)	(kg/h)		
20169338	RL 55/M BLU TC FS1 3/230-400/50 230/50-60	190/356-712	16/30-60	2,2	(1)
20169330	RL 85/M BLU TC FS1 3/230-400/50 230/50-60	223/594-1023	18,8/50-86,2	2,6	(1)

Other versions, with FS2 (continuous working), are available on request.

(1) with RFGO control box

(2) with LAL control box

Net calorific value: 11,8 kWh/kg - 10200 kcal/kg - Viscosity at 20°C: 4-6 mm²/s (cSt)

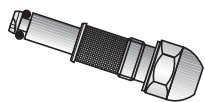
The burners of RL/M BLU series are in according to to 2014/30/EU - 2014/35/EU - 2006/42 EC Directive and EN 267.

Due to the improvement of the technical specification of some products, some burner codes have been changed. The table below summarizes the correspondence between the previous and the new code.

MODEL	NEW CODE	OLD CODE
RL 55/M BLU TC FS1 3/230-400/50 230/50-60	20169338 (1)	3899210 (2)
RL 85/M BLU TC FS1 3/230-400/50 230/50-60	20169330 (1)	3896011 (2)

Burner accessories

Nozzles type A3 60°



The return nozzles must be ordered separately. The following table shows the features and codes on the basis of the maximum required fuel output.

BURNER	RATED DELIVERY (kg/h) (*)	NOZZLE CODE
▶ RL 55-85/M BLU	30	3009867
	40	3009868
	50	3009869
	60	3009870
	90	3009871
	80	3009872

(*) Nozzle rated delivery is referred to atomised pressure

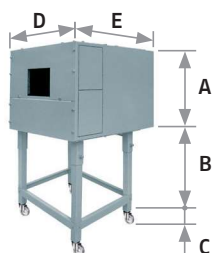
Spacer kit



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
▶ RL 55-85/M BLU	135	3010129

Sound proofing box



If noise emission needs reducing even further, sound-proofing boxes are available. When a lower "B" dimension is required, it is available the Box Support Kit code 20065135 which allows to reduce it at the fixed dimension of 55 mm. The sound-proofing boxes are not suitable for outdoor use.

BURNER	BOX TYPE	A (mm)	B (mm) min-max	C (mm)	D (mm)	E (mm)	[dB(A)] (*)	BOX CODE
▶ RL 55/M BLU RL 85/M BLU	C4/5	850	160 - 980	110	980	930	10	3010404

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

Degasing unit



To solve problem of air in the oil sucked, two versions of degasing unit are available.

BURNER	FILTER	FILTERING DEGREE (µm)	DEGASING UNIT CODE
▶ RL 55-85/M BLU	With filter	50 - 75	3010055

NOTE: For burner deliveries higher than 80 kg/h, install two parallel degasing units.

Low NOx Modulating Light Oil Burners

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Burner accessories

Accessories for modulating operation



To obtain modulating operation, the RL/M BLU series of burners requires a regulator with three point outlet controls. The following table lists the accessories for modulating operation with their application range. For remote setpoint use RWF 55.

BURNER	REGULATOR TYPE	REGULATOR CODE
▶ RL 55-85/M BLU	RWF 50.2	20082208
	RWF 55.5	20099657



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
▶ RL/M BLU	Temperature PT 100	-100 ÷ 500°C	3010110
▶ RL/M BLU	Pressure 4 ÷ 20 mA	0 ÷ 2,5 bar	3010213
▶ RL/M BLU	Pressure 4 ÷ 20 mA	0 ÷ 16 bar	3010214



Depending on the servomotor fitted to the burner, a three-pole potentiometer (1000 Ω) can be installed to check the position of the servomotor. The KITS available for the various burners are listed below.

BURNER	POTENTIOMETER KIT CODE
▶ RL 55-85/M BLU	3010021