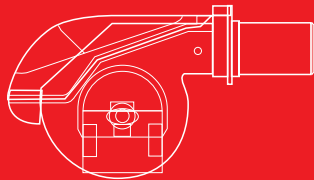
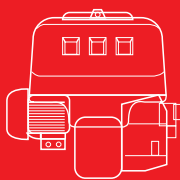




RL/M Series

Modulating Light Oil Burners

RL28/M	90/166 ÷ 332	kW
RL38/M	101/237 ÷ 450	kW
RL50/M	130/296 ÷ 593	kW
RL70/M	261/474 ÷ 1043	kW
RL100/M	332/711 ÷ 1482	kW
RL130/M	498/948 ÷ 1779	kW
RL190/M	534/1423 ÷ 2431	kW



The Riello RL/M series of burners covers a firing range from 166 to 2431 kW, and they have been designed for use in hot or superheater water boilers, hot air or steam generators, 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 series burners guarantees high efficiency levels in all the various applications, thus reducing fuel consumption and running costs. Optimisation of sound emissions is guaranteed by the use of fans with forward inclined 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.

Technical Data

Model		RL28/M	RL38/M	RL50/M
Burner operation mode		Modulating (with regulator and probes accessories)		
Modulation ratio at max. output		3 ÷ 1		
Servomotor	type	SQN90		
	run time	24		
Heat output	kW	90/166 - 332	101/237 - 450	130/296 - 593
	Mcal/h	81,7/143 - 286	87/204 - 387	112/255 - 510
	kg/h	8/14 - 28	8,5/20 - 38	11/25 - 50
Working temperature		°C min./max. 0/40		
Net calorific value	kWh/kg	11,8		
	kcal/kg	10.200		
Viscosity		mm ² /s (cSt) 4 - 6		
Pump	type	AL 75C	AL 95C	AL 95C
	output	kg/h at 20 bar 74	99	99
Atomised pressure		bar 20		
Fuel temperature		max. °C 50		
Fuel pre-heater		--		
Fan		type (01)		
Air temperature		max. °C 60		
Electrical supply		(03)	(04)	(04)
Auxiliary electrical supply		Ph/Hz/V (03)		
Control box		type LAL 1.25		
Total electrical power		kW 0,4	0,6	0,8
Auxiliary electrical power		kW 0,15		
Heaters electrical power		kW --		
Protection level		IP 44		
Pump motor electrical power		kW --		
Rated pump motor current		A --		
Pump motor start up current		A --		
Pump motor protection level		IP --		
Fan motor electrical power		kW 0,25	0,45	0,65
Rated fan motor current		A 2,1	2 - 1,2	3 - 1,7
Fan motor start up current		A 10	9,5 - 5,5	13.8 - 8
Fan motor protection level		IP 40	54	54
Ignition transformer	type			
	V1 - V2	230V - 2x5kV		
	I1 - I2	1,9A - 30 mA		
Operation		(10)		
Sound pressure		dB (A) 68	70	75
Sound power		W --		
CO emission		mg/kWh < 40		
Grade of smoke indicator		N° Bacharach < 10		
CxHy emission		mg/kWh < 10 (after the first 20s)		
NOx emission		mg/kWh < 200		
Directive		2006/95 - 2004/108 - 2006/42 EC		
Conforming to		CE 1001/R		

(01) Centrifugal with reverse curve blades

(02) Centrifugal with forward curve blades

(03) 1/50/230~(±10%)

(04) 3N/50/400~(±10%) 3/50/230~(±10%)

(*) - available also with M0 535

(05) Intermittent (at least one stop every 24 h)

(06) Intermittent (at least one stop every 24 h) - Continuous as optional (at least one stop every 72

Reference conditions:

Temperature: 20°C - Pressure: 1013,5 mbar - Altitude: 0 m a.s.l. - Noise measured at a distance of 1 meter.

Model		RL70/M	RL100/M	RL130/M	RL190/M
Burner operation mode		Modulating (with regulator and probes accessories)			
Modulation ratio at max. output		3 - 1			
Servomotor	type	SQN31			
	run time	42			
Heat output	kW	261/474 - 1043	332/711 - 1482	498/948 - 1779	534/1423 - 2431
	Mcal/h	224/408 - 897	286/612 - 1275	428/816 - 1530	459/1224 - 2091
	kg/h	22/40 - 88	28/60 - 125	42/80 - 150	45/120 - 205
Working temperature	°C min./max.	0/40			
Net calorific value	kWh/kg	11,8			
	kcal/kg	10.200			
Viscosity	mm ² /s (cSt)	4 - 6			
Pump	type	J 7C			TA 3
	output	190			665
Atomised pressure	bar	20			
Fuel temperature	max. °C	50			
Fuel pre-heater		--			
Fan	type	(01)			(02)
Air temperature	max. °C	60			
Electrical supply	Ph/Hz/V	(04)			
Auxiliary electrical supply	Ph/Hz/V	(03)			
Control box	type	LAL 1.25 (Intermittent working) - LOK 16 (Continuous working)			
Total electrical power	kW	1,4	2,1	2,6	5,5
Auxiliary electrical power	kW	0,3	0,3	0,4	1
Heaters electrical power	kW	--			
Protection level	IP	44			
Pump motor electrical power	kW	--			
Rated pump motor current	A	--			
Pump motor start up current	A	--			
Pump motor protection level	IP	--			
Fan motor electrical power	kW	1,1	1,8	2,2	4,5
Rated fan motor current	A	4,8 - 2,8	7,3 - 4,2	8,8 - 5,1	15,8 - 9,1
Fan motor start up current	A	25 - 14,6	37,6 - 21,8	57,2 - 33,2	126 - 73
Fan motor protection level	IP	54			
Ignition transformer	type	--			
	V1 - V2	230V - 2x5kV			
	I1 - I2	1,9 A - 30 mA			1,9 A - 35 mA
Operation		(06)			
Sound pressure	dB (A)	75	77	78,5	84,9
Sound power	W	--			
CO emission	mg/kWh	< 40			
Grade of smoke indicator	N° Bacharach	< 1			
CxHy emission	mg/kWh	< 10 (after the first 20s)			
NOx emission	mg/kWh	< 200			
Directive		2006/95 - 2004/108 - 2006/42 EC			
Conforming to		CE 0440/B			

(01) Centrifugal with reverse curve blades

(02) Centrifugal with forward curve blades

(03) 1/50/230~(±10%)

(04) 3N/50/400~(±10%) 3/50/230~(±10%)

(*) - available also with MO 535

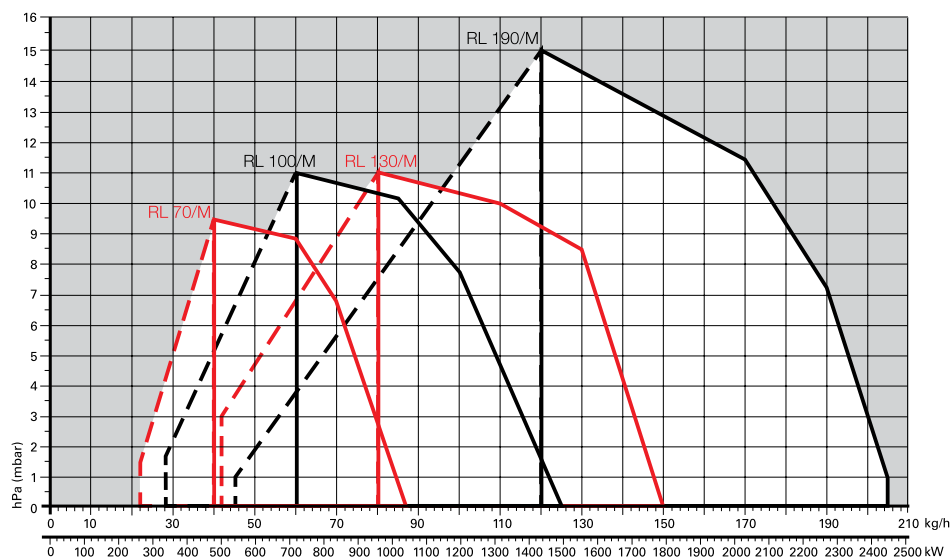
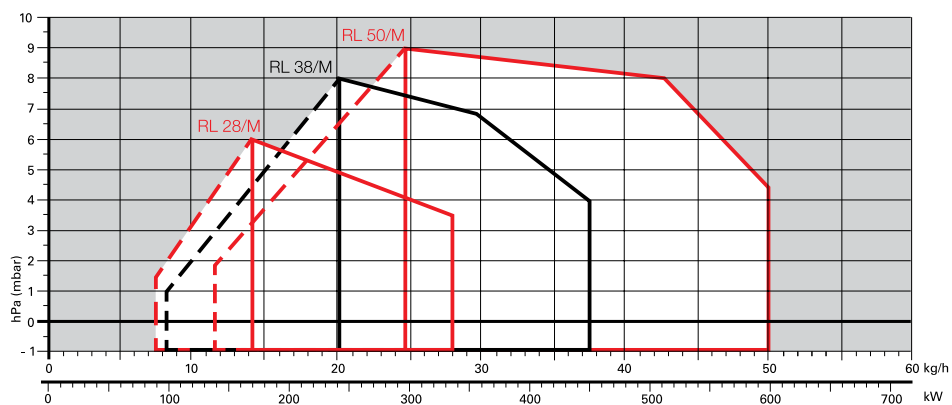
(05) Intermittent (at least one stop every 24 h)

(06) Intermittent (at least one stop every 24 h) - Continuous as optional (at least one stop every 72

Reference conditions:

Temperature: 20°C - Pressure: 1013,5 mbar - Altitude: 0 m a.s.l. - Noise measured at a distance of 1 meter.

Firing Rates



Fuel Supply

Hydraulic Circuit

Various hydraulic circuits are available, depending on fuel output asset according to local norms of steam generators.

The burners are fitted with two valves for oil output from the pump: a pressure regulator on the return circuit from the nozzle allows varying the quantity of burnt fuel.

A safety valve on the return circuit impedes oil leakage from the nozzle when the burner is in stand by and pre-purge phases.

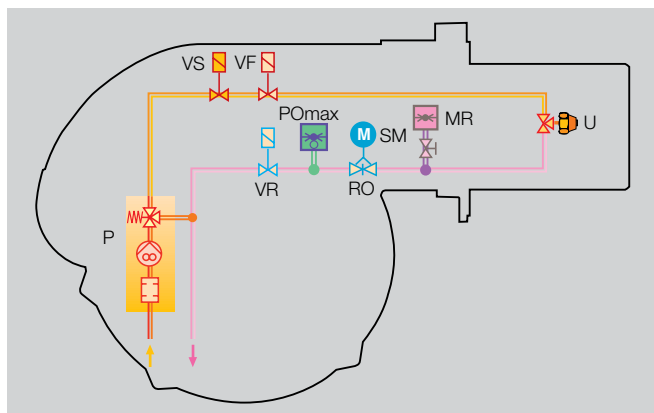
Beginning with the RL 100/M model, the burners have a double safety valve on the return circuit.

The models fitted with a minimum pressure switch on the oil delivery circuit can be installed on steam generators according to TRD-72 standard (Germany) and NBN standard (Belgium).

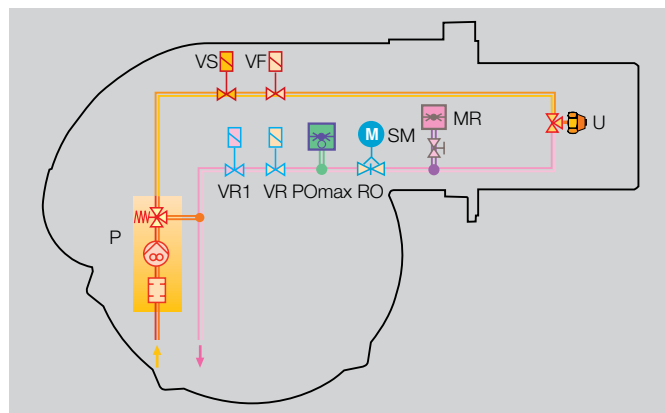


Example of the hydraulic circuit on RL70/M burners

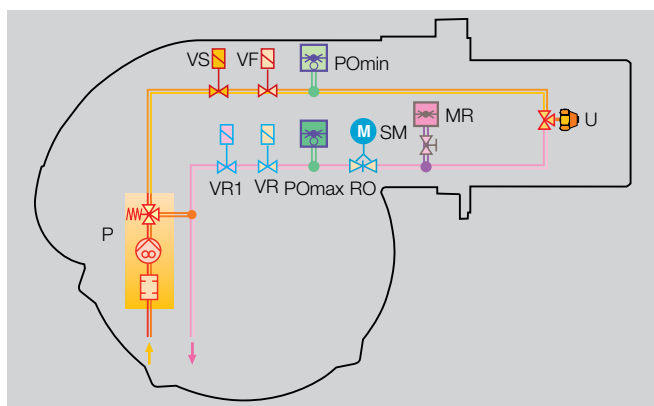
EN 267 < 100 Kg/h



EN 267 > 100 Kg/h



Versions for TRD-72, NBN steam generators



P	Pump with filter and pressure regulator on the output circuit
VS	Safety valve on the output circuit
VF	Working valve on the output circuit
PO min	Min. Oil pressure switch on the output circuit
U	Nozzle
MR	Pressure gauge on the return circuit
SM	Servomotor
RO	Pressure regulator on the return circuit
PO max	Max. Oil pressure switch on the return circuit
VR	1 st safety valve on the return circuit
VR1	2 nd safety valve on the return circuit

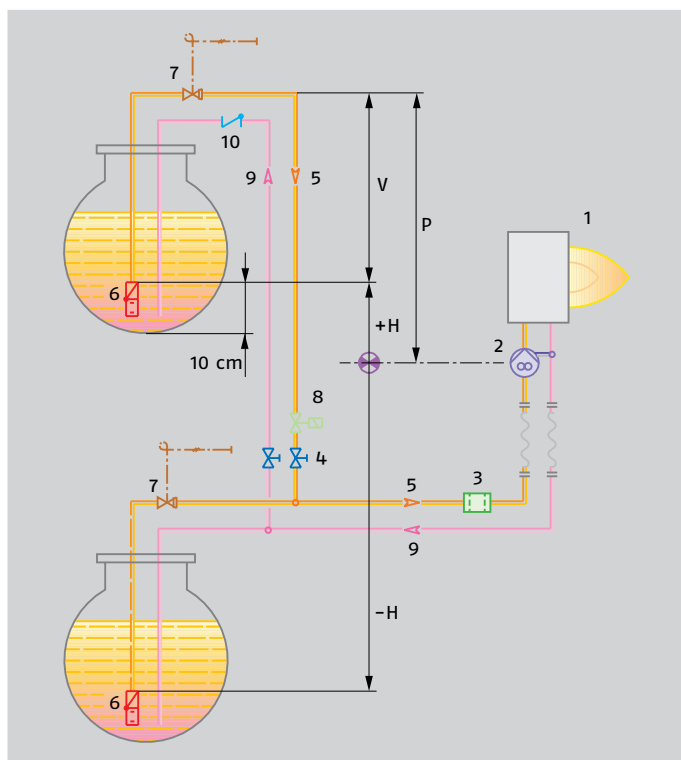
Selecting The Fuel Supply Lines

The fuel feed must be completed with the safety devices required by the local regulations in force. The table shows the choice of piping diameter for the various burners, depending on the difference in the height between the burner and the tank and the distance between them.

MAXIMUM EQUIVALENT LENGTH OF THE PIPEWORK L [m]

Model	RL 28/M			RL 38-50/M			RL 70-100-130/M			RL 190/M	
Diameter piping	ø10 mm	ø12 mm	ø14 mm	ø10 mm	ø12 mm	ø14 mm	ø12 mm	ø14 mm	ø16 mm	ø16 mm	ø18 mm
+H -H (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)	L max (m)
+4,0	83	144	150	51	112	150	71	138	150	60	80
+3,0	55	127	150	46	99	150	62	122	150	50	70
+2,0	48	111	150	39	86	150	58	106	150	40	60
+1,5	44	102	150	35	79	147	51	98	150	35	55
+1,0	40	94	150	32	73	144	44	90	150	30	50
+0,5	37	86	150	29	65	132	40	82	150	25	45
0	33	78	150	26	60	120	36	74	137	20	40
-0,5	29	70	133	23	54	106	32	66	123	18	35
-1,0	25	82	118	20	47	96	28	56	109	15	30
-1,5	21	63	103	16	40	83	23	49	95	13	25
-2,0	17	45	88	13	34	71	19	42	81	10	20
-3,0	10	29	58	7	21	46	10	26	53	5	10
-4,0	4	12	28	2	8	21	3	10	25	3	6

Type of system that can be installed



H	Difference in height pump-foot valve
ø	Internal pipe diameter
P	Height 10 m
V	Height 4 m
1	Burner
2	Burner Pump
3	Filter
4	Manual shut off valve
5	Suction pipework
6	Bottom valve
7	Remote controlled rapid manual shut off valve (compulsory in Italy)
8	Type approved shut off solenoid valve (compulsory in Italy)
9	Return pipework
10	Check valve

With ring distribution oil systems, the feasible drawings and dimensioning are the responsibility of specialised engineering studios, who must check compatibility with the requirements and features of each single installation.

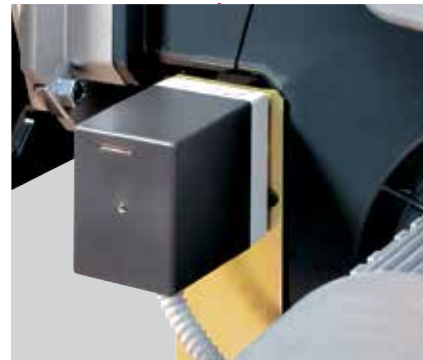
Ventilation

The ventilation circuit produces low noise levels with high performance pressure and air output, in spite of the compact dimensions.

Except for the RL 190/M model, the use of reverse curve blades and sound proofing material keeps noise level very low.

In the RL 190/M model, sound has been reduced by the special design of the air suction circuit.

A variable profile cam connects fuel and air setting, ensuring high fuel efficiency in all firing ranges.



Example of the servomotor for air/oil setting

Combustion Head

Different lengths of the combustion head can be chosen for the RL series of burners.

The choice depends on the thickness of the front panel and the type of boiler.

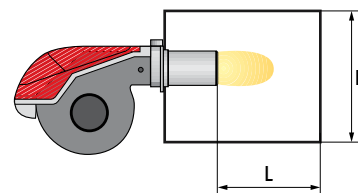
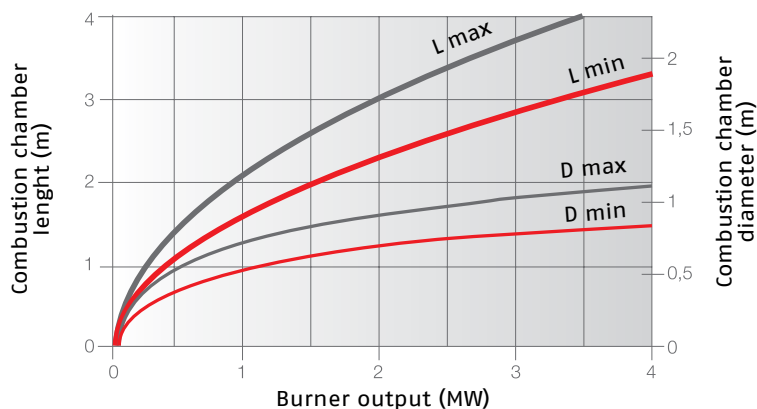
Depending on the type of generator, check that the penetration of the head into the combustion chamber is correct.

The internal position of the combustion head can easily be adjusted to the maximum defined output by adjusting a screw fixed to the flange.



Example of a RL/M burner combustion head.

DIMENSIONS OF THE COMBUSTION CHAMBER



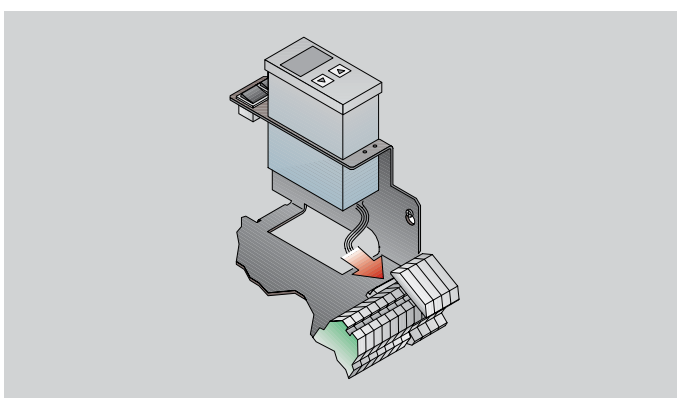
Example:
 Burner thermal output = 2000 kW;
 L Combustion chamber (m) = 2,7 m (medium value);
 D Combustion chamber (m) = 0,8 m (medium value)

Burner Operation Mode

The RL/M series of burners can have "two-stage progressive" or "modulating" operation.

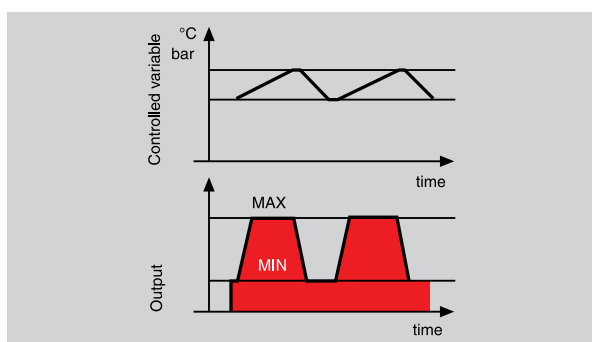
On "two-stage progressive" operation, the burner gradually adapts the output to the requested level, by varying between two pre-set levels (see picture A).

On "modulating" operation, normally required in steam generators, in superheater boilers or diathermic oil burners, a specific regulator and probes are required. These are supplied as accessories that must be ordered separately. The burner can work for long periods at intermediate output levels (see picture B).



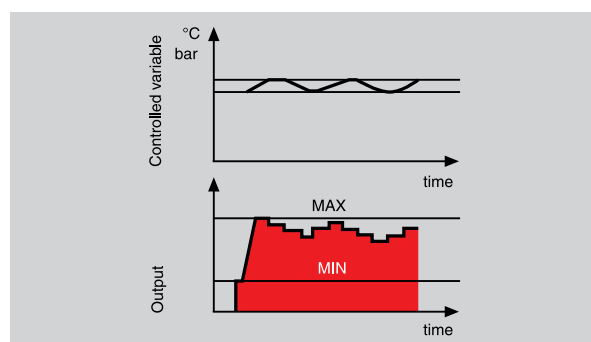
Example of a regulator.

"TWO-STAGE PROGRESSIVE" OPERATION



Picture A

"MODULATING" OPERATION

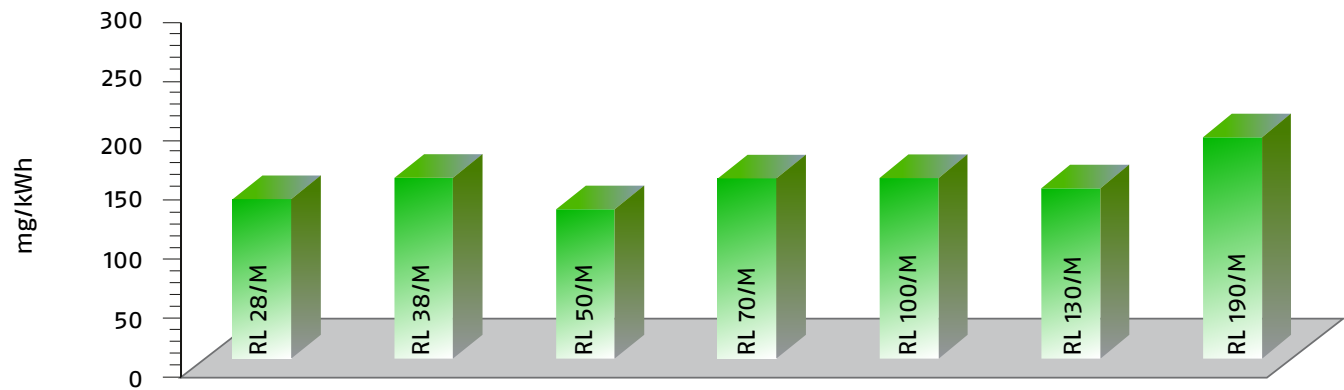


Picture B

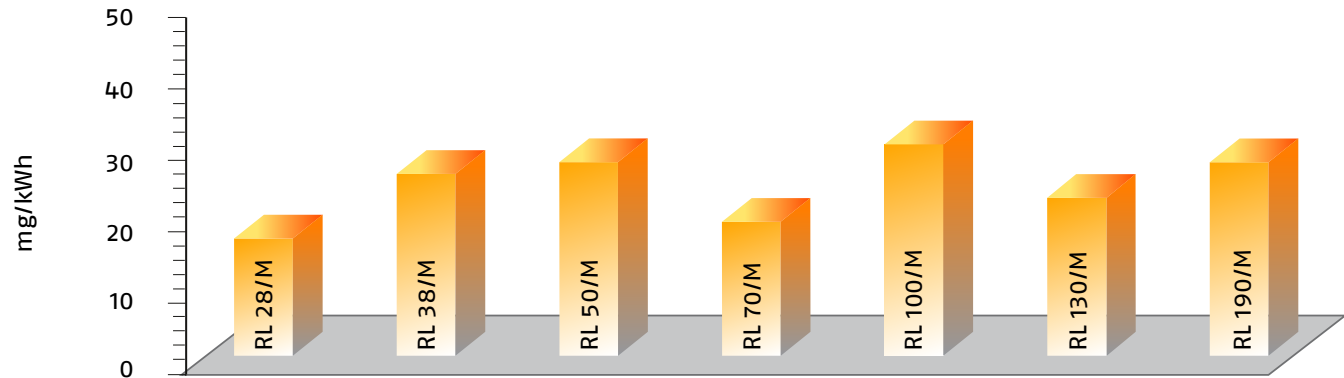
Emissions

The emission data has been measured in the various models at maximum output, according to EN 267 standard.

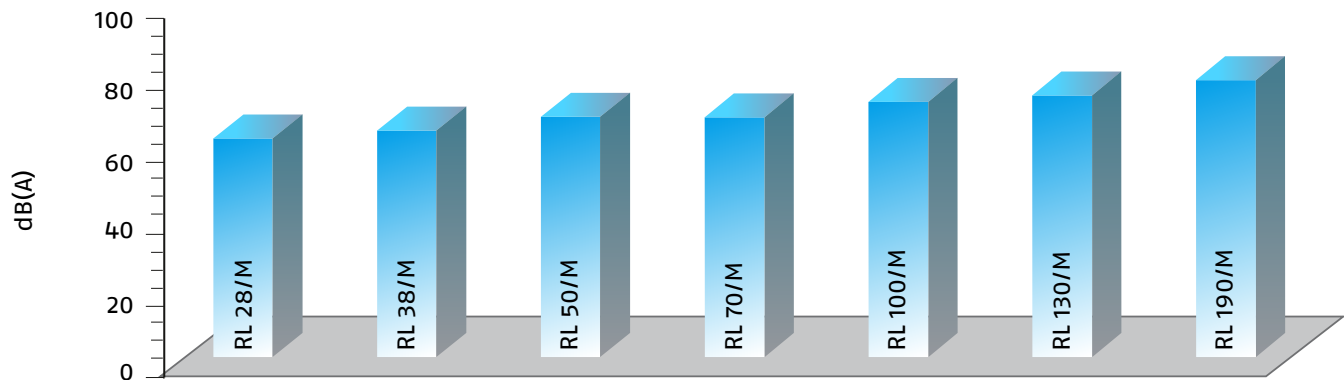
NO2 EMISSIONS



CO EMISSIONS



NOISE EMISSIONS

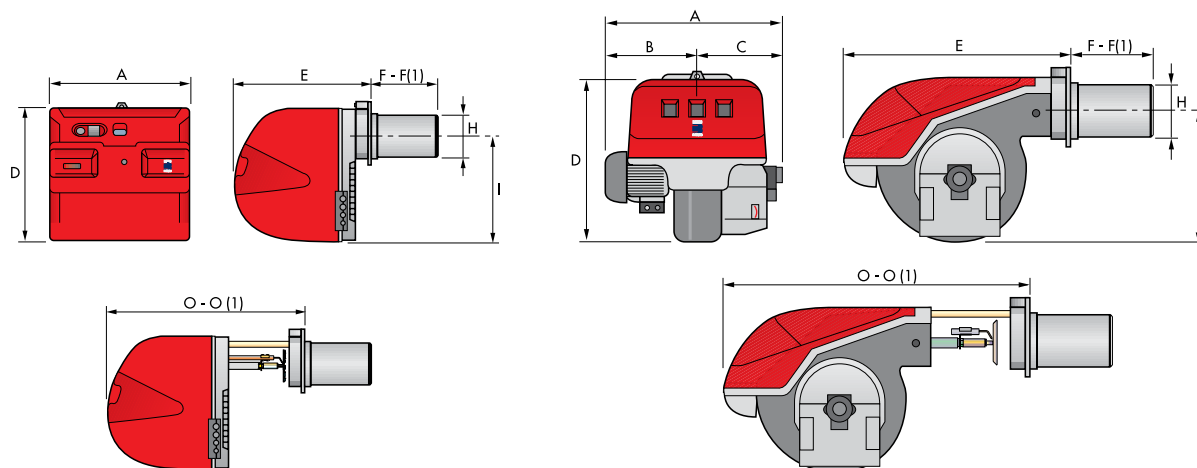


The noise emissions have been measured at the maximum output.

Overall Dimensions (mm)

RL28/M - RL38/M - RL50/M

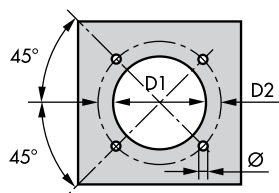
RL70/M - RL100/M - RL130/M - RL190/M



Model	A	B	C	D	E	F - F (1)	H	I	O - O (1)
RL28/M	476	-	-	474	468	241 - 351	140	352	672 - 807
RL38/M	476	-	-	474	468	241 - 351	140	352	672 - 807
RL50/M	476	-	-	474	468	241 - 351	152	352	672 - 807
RL70/M	663	296	367	555	680	272 - 385	179	430	951 - 1086
RL100/M	679	312	367	555	680	272 - 385	179	430	951 - 1086
RL130/M	705	338	367	555	680	272 - 385	189	430	951 - 1086
RL190/M	813	366	447	555	712	370	222	430	1166

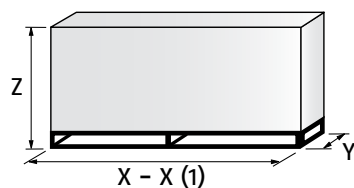
(1) Length with extended combustion head.

BURNER - BOILER MOUNTING FLANGE



Model	D1	D2	Ø
RL28/M	160	224	M8
RL38/M	160	224	M8
RL50/M	160	224	M8
RL70/M	185	275 - 325	M12
RL100/M	185	275 - 325	M12
RL130/M	195	275 - 325	M12
RL190/M	230	325 - 368	M16

PACKAGING



Model	X - X (1)	Y	Z	Kg
RL28/M	872	540	550	39
RL38/M	872	540	550	41
RL50/M	872	540	550	42
RL70/M	1150	792	600	65
RL100/M	1150	792	600	68
RL130/M	1150	792	600	71
RL190/M	1200	800	850	95

(1) Length with extended combustion head.

Installation Description

Skilled and qualified personnel must perform installation, start up and maintenance.

All operations must be carried out as described in the technical handbook supplied with the burner.

BURNER SETTING

All the burners have slide bars, for easier installation and maintenance. After drilling the boilerplate, using the supplied gasket as a template, dismantle the blast tube from the burner and fix it to the boiler.

Adjust the combustion head.

Refit the burner casing to the slide bars.

Install the nozzle, choosing this on the basis of the maximum boiler output and following the diagrams included in the burner instruction handbook.

Check the position of the electrodes.

Close the burner, sliding it up to the flange, keeping it slightly raised to avoid the flame stability disk rubbing against the blast tube.

HYDRAULIC AND ELECTRICAL CONNECTIONS AND START UP

The burners are supplied for connection to two pipes fuel supply system.

Connect the ends of the flexible pipes to the suction and return pipework using the supplied nipples.

Make the electrical connections to the burner following the wiring diagrams included in the instruction handbook.

Prime the pump by turning the motor (after checking rotation direction if it is a three phase motor).

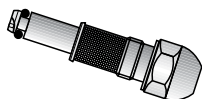
On start up, check:

- Pressure pump and valve unit regulator (to max. and min.)
- Combustion quality, in terms of unburned substances and excess air.



Burner accessories

RETURN NOZZLES TYPE A3, A4 45°



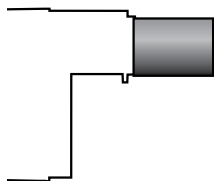
The following list shows the features and codes on the basis of the maximum required fuel output.

NOTE: each burner needs N° 1 nozzle.

BURNER	RATED OUTPUT kg/h	A3 NOZZLE CODE	A4 NOZZLE CODE
RL28/M	15	3009850	-
RL28/M - 38/M	20	3009851	-
RL28/M - 38/M - 50/M	30	3009852	-
RL38/M - 50/M - 70/M	40	3009853	20067277
RL50/M - 70/M	50	3009854	20067279
RL70/M - 100/M	60	3009855	20067281
RL70/M - 100/M	70	3009856	20067283
RL100/M - 130/M	80	3009857	20067284
RL100/M - 130/M	90	3009858	20067285
RL100/M - 130/M	100	3009859	20067286
RL130/M	110	3009860	20067287
RL130/M - 190/M	120	3009861	20067288
RL130/M - 190/M	130	3009862	20067289
RL190/M	140	3009863	20067290
RL190/M	150	20059496*	20067290
RL190/M	160	3009864	20067293
RL190/M	180	3009865	20067295
RL190/M	200	3009866	20067297

* 60° Angle

EXTENDED HEAD KIT



"Standard head" burners can be transformed into "extended head" versions, by using the special kit.

BURNER	STANDARD HEAD LENGTH (mm)	EXTENDED HEAD LENGTH (mm)	KIT CODE
RL28/M	241	351	3010120
RL38/M	241	351	3010121
RL50/M	241	351	3010122
RL70/M	272	385	3010159
RL100/M	272	385	3010160
RL130/M	272	385	3010161
RL190/M	370	526	20058084

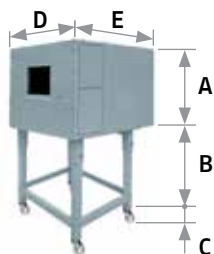
SPACER KIT



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

BURNER	SPACER THICKNESS S (mm)	KIT CODE
RL28/M - 38/M - 50/M	110	3010095
RL70/M - 100/M - 130/M	135	3010129
RL190/M	102	3000722

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
RL28/M - 38/M RL50/M	C1/3	650	372 - 980	110	690	770	10	3010403
RL70/M - 100/M RL130/M - 190/M	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 (*)
RL28/M - 38/M RL50/M - 70/M RL100/M	With filter	50 - 75	3010055
RL28/M - 38/M RL50/M - 70/M RL100/M	Without filter	-	3010054

(*) Max capability 80 kg/h (more filters are needed for higher flow).

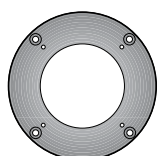
HEAD KIT FOR "REVERSE FLAME CHAMBER"



In certain cases, the use of the burner on reverse flame boilers can be improved by using an additional cylinder.

BURNER	STANDARD HEAD LENGTH WITH CYLINDER (mm)	EXTENDED HEAD LENGTH WITH CYLINDER (mm)	KIT CODE
RL28/M - 38/M	319	429	3010178
RL50/M	319	429	3010179
RL70/M - 100/M	375	488	3010180
RL130/M	375	488	3010183
RL190/M	493	-	3010241

CONNECTION FLANGE KIT



A kit is available for use where the burner opening on the boiler is of excessive diameter.

BURNER	KIT CODE
RL28/M - 38/M RL50/M	3010138

Burner accessories

Accessories for modulating operation



To obtain modulating operation, the RL/M series of burners requires a regulator.

BURNER	REGULATOR TYPE	REGULATOR CODE
RL28/M - 38/M - 50/M	RWF 50.2	20082208
RL70/M - 100/M - 130/M - 190/M	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
RL28/M - 38/M - 50/M	Temperature PT 100	-100 ÷ 500°C	3010110
RL70/M - 100/M - 130/M	Pressure 4 ÷ 20 mA	0 ÷ 2,5 bar	3010213
RL190/M	Pressure 4 ÷ 20 mA	0 ÷ 16 bar	3010214
	Pressure 4 ÷ 20 mA	0 ÷ 25 bar	3090873



Depending on the servomotor fitted to the burner, a three-pole potentiometer (1000 Ω) can be installed to check the position of the servomotor.

BURNER	POTENTIOMETER KIT CODE
RL28/M - 38/M - 50/M	3010109
RL70/M - 100/M - 130/M	3010416
RL190/M	

Specification

DESIGNATION OF SERIES

A specific index guides your choice of burner from the various models available in the RL/M series. Below is a clear and detailed specification description of the product.

Series: R									
Fuel: S Natural gas									
L Light oil									
LS Light oil / Natural gas									
N Heavy oil									
Size									
Operation : /1 One stage									
... Two stage									
/M Modulating									
/E Electronic cam									
/P Proportioning air/gas valve									
/EV Electronic cam predisposed for variable speed (with inverter)									
Emission: ... Class 1 EN267 - EN676									
MZ Class 2 EN267 - EN676									
BLU Class 3 EN267 - EN676									
Class 2 EN267									
MX Class 3 EN676									
Head: TC Standard head									
TL Extended head									
Flame control system :									
FS1 Standard (1 stop every 24 h)									
FS2 Continuous working (1 stop every 72 h)									
Electrical supply to the system :									
1/230/50 1/230V/50Hz									
3/230/50 3/230V/50Hz									
3/400/50 3N/400V/50Hz									
3/230-400/50 3/230V/50Hz - 3N/400V/50Hz									
3/220/60 3/220V/60Hz									
3/380/60 3N/380V/60Hz									
3/220-380/60 3/220V/60Hz - 3N/380V/60Hz									
Auxiliary voltage :									
230/50-60 230V/50-60Hz									
110/50-60 110V/50-60Hz									
ID : Differential switch									
R	L	50	/M		TC	FS1	3/230-400/50	230/50-60	
BASIC DESIGNATION									
EXTENDED DESIGNATION									

AVAILABLE BURNER MODELS

BURNER MODELS	HEAD LENGTH	FLAME CONTROL SYSTEM	ELECTRICAL SUPPLY	AUXILIARY VOLTAGE
RL 28/M	TC	FS1	1/230/50	230/50-60
RL 28/M	TL	FS1	1/230/50	230/50-60
RL 28/M	TC	FS1	1/220-230/60	230/50-60
RL 28/M	TL	FS1	1/220-230/60	230/50-60
RL 38/M	TC	FS1	3/230-400/50	230/50-60
RL 38/M	TL	FS1	3/230-400/50	230/50-60
RL 38/M	TC	FS1	3/208-230/380-460/60	230/50-60
RL 38/M	TL	FS1	3/208-230/380-460/60	230/50-60
RL 50/M	TC	FS1	3/230-400/50	230/50-60
RL 50/M	TL	FS1	3/230-400/50	230/50-60
RL 50/M	TC	FS1	3/208-230/380-460/60	230/50-60
RL 50/M	TL	FS1	3/208-230/380-460/60	230/50-60
RL 70/M	TC	FS1	3/230-400/50	230/50-60
RL 70/M	TL	FS1	3/230-400/50	230/50-60
RL 70/M	TC	FS1	3/208-230/380-460/60	230/50-60
RL 70/M	TL	FS1	3/208-230/380-460/60	230/50-60
RL 70/M	TC	FS2	3/230-400/50	230/50-60
RL 70/M	TL	FS2	3/230-400/50	230/50-60
RL 100/M	TC	FS1	3/230-400/50	230/50-60
RL 100/M	TL	FS1	3/230-400/50	230/50-60
RL 100/M	TC	FS1	3/208-230/380-460/60	230/50-60
RL 100/M	TL	FS1	3/208-230/380-460/60	230/50-60
RL 100/M	TC	FS2	3/230-400/50	230/50-60
RL 100/M	TL	FS2	3/230-400/50	230/50-60
RL 130/M	TC	FS1	3/230-400/50	230/50-60
RL 130/M	TL	FS1	3/230-400/50	230/50-60
RL 130/M	TC	FS1	3/208-230/380-460/60	230/50-60
RL 130/M	TL	FS1	3/208-230/380-460/60	230/50-60
RL 130/M	TC	FS2	3/230-400/50	230/50-60
RL 130/M	TL	FS2	3/230-400/50	230/50-60
RL 190/M	TC	FS1	3/400/50	230/50-60
RL 190/M	TC	FS1	3/230/50	230/50-60
RL 190/M	TC	FS1	3/460/60	220/60
RL 190/M	TC	FS1	3/220/60	220/60
RL 190/M	TC	FS2	3/400/50	230/50-60
RL 190/M	TC	FS2	3/230/50	230/50-60
RL 190/M	TL	FS1	3/400/50	230/50-60

Other versions are available on request.

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 (forward curve blades on the 190/M model) 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 (single-phase, 230V and 50Hz for the 28/M model)
- 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 for models RL 100/M, RL 130/M, RL 190/M and for all models in the TRD-72, NBN version
- safety oil pressure switch for stop the burner in case of problems in the return circuit
- minimum oil pressure switch in the output circuit for the TRD-72, NBN versions
- photocell for flame detection
- flame control panel, fitted with control function for the correct positioning of the servomotor and possibility of post-ventilation by just changing the electric wiring
- 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.

Conforming to:

- (2004/108) EC directive (electromagnetic compatibility)
- (2006/95) EC directive (low voltage)
- (2006/42) EC directive (machinery)
- EN 267 (liquid fuel burners).

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
- 4 extensions for slide bar (for models with 385 mm blast tube)
- instruction handbook for installation, use and maintenance
- spare parts catalogue.

Available accessories to be ordered separately:

- return nozzles
- extended head kit (except for the RL 190/M model)
- spacer kit
- sound-proofing box
- degasing unit
- head kit for "reverse flame chamber"
- connection flange kit
- RWF 40 output regulator
- temperature probe
- pressure probe
- potentiometer kit for the servomotor.

Riello Burners a world of experience in every burner we sell.

11/2015

TS0012UK06



[1]



[2]

[1] BURNERS PRODUCTION PLANT
S. PIETRO, LEGNAGO (VERONA) - ITALIA

[2] HEADQUARTER BURNERS DIVISION
S. PIETRO, LEGNAGO (VERONA) - ITALIA

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 year. 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 13 operational branches abroad (in Europe, America and Asia), with customers in over 60 countries.

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