Two stage light oil burners

RL 50-64



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RL 50-64 series of burners covers a firing range from 148 to 830 kW, and it has been designed for use in low or medium temperature hot water boilers, hot air or steam boilers, diathermic oil boilers. Operation is “two stage”; the burners are fitted with a microprocessor-based control panel, which supplies indication of burner status and fault causes.
Optimization of sound emissions is guaranteed by the special design of the air suction circuit and by incorporated sound proofing material. The elevated performance of the fans and combustion head, guarantee flexibility of use and excellent working at all firing rates.
The exclusive design ensures reduced dimensions, simple use and maintenance.
A wide range of accessories guarantees elevated working flexibility.

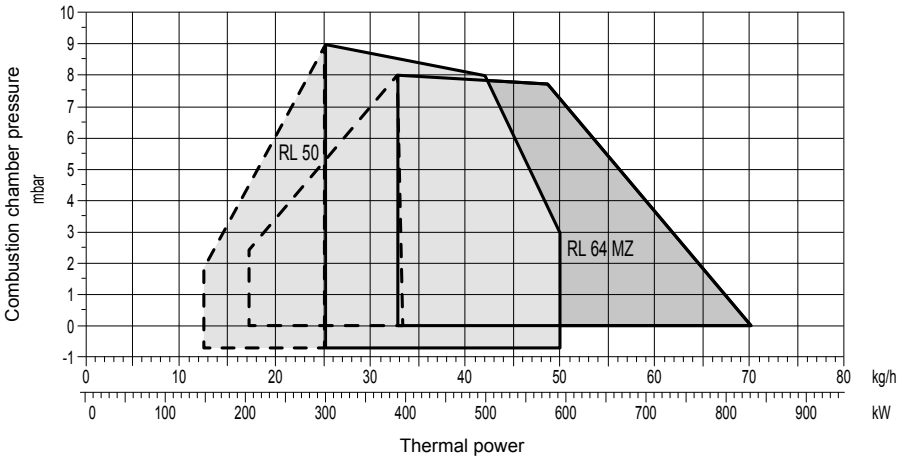
Guidelines for installation of burners in conformity to EU Regulation:
A RIELLO burner (Heat Generator), where it is matched with a water-based boiler (Heater Housing) with a nominal output ≤ 400 kW, providing heat for heating purposes and heat to deliver sanitary hot water, can be installed:
– With 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.

TECHNICAL DATA

Description	Heat output		Total electrical power	Electric power supply		Note	Code
	kW	kg/h	kW	Ph/V/Hz	V/Hz		
RL 50 TC FS1	148/296-593	12.5/25-50	0.75	3/400/50	230/50-60	(1)	**3474632**
RL 50 TL FS1	148/296-593	12.5/25-50	0.75	3/400/50	230/50-60	(1)	**3474633**
RL 50 TC FS1	148/296-593	12.5/25-50	0.75	3/380-460/60	230/50-60	(1)	**3474680**
RL 50 TL FS1	148/296-593	12.5/25-50	0.75	3/380-460/60	230/50-60	(1)	**3474681**
RL 64 MZ TC FS1	206/391-830	17.4/33-70	1.4	3/400/50	230/50-60	(1)	**3470410**
RL 64 MZ TL FS1	206/391-830	17.4/33-70	1.4	3/400/50	230/50-60	(1)	**3470411**

Net calorific value of light oil: 11.86 kWh/kg - Viscosity at 20 °C: 4-6 mm^2/s (cSt).
The burners comply with 2014/30/EU - 2014/35/EU - 2006/42/EC Directives and EN 267 Standard.
(1) Model with plug and socket.
ATTENTION: the nozzles are supplied as accessories which must be ordered separately; please refer to the "NOZZLES" section.

FIRING RATES



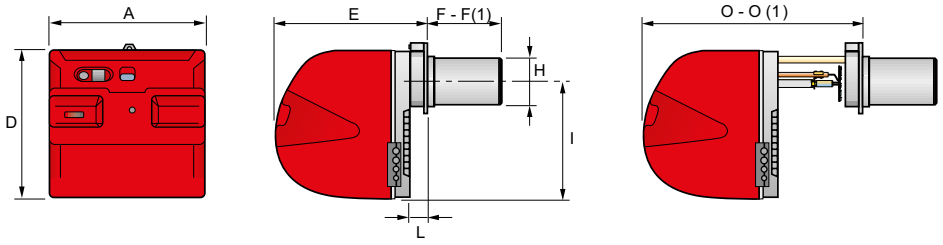
Useful working field for choosing the burner

Modulation range

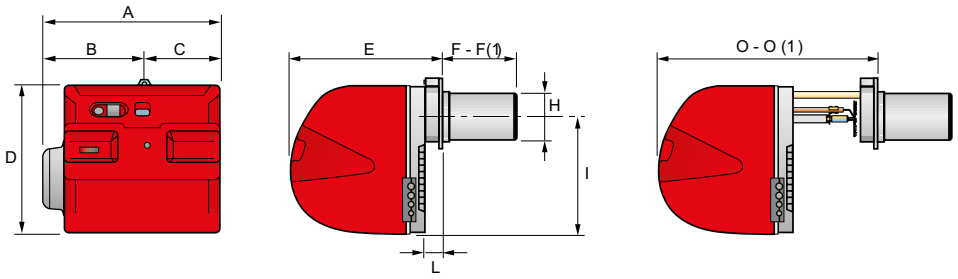
Test conditions conforming to EN267
Temperature: 20 °C
Pressure: 1013,5 mbar
Altitude: 0 m a.s.l.

OVERALL DIMENSIONS

RL 50

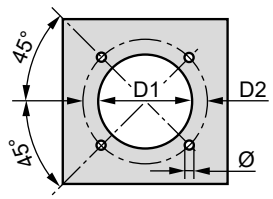


RL 64 MZ

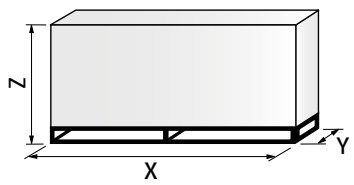


Description	A mm	B mm	C mm	D mm	E mm	F - F(1) mm	H mm	I mm	L mm	O - O(1) mm
RL 50	476	-	-	474	468	216 - 351	152	352	52	672 - 807
RL 64 MZ	538	300	238	490	477	250 - 385	179	335	60	680 - 815

(1) Dimension with extended head.



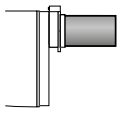
Description	D1 mm	D2 mm	Ø mm
RL 50	160	224	M8
RL 64 MZ	185	275-325	M12



Description	X(1) mm	Y mm	Z mm	Net weight kg
RL 50	1200	520	502	39
RL 64 MZ	1200	560	520	42

(1) Length with short and extended head.

ACCESSORIES

Drawing	Burner model	Specification	Code
		**EXTENDED HEAD KIT** "Standard head" burners can be transformed into "extended head" versions, by using the special kit. The kit available, giving the original and the extended lengths, is listed below.	
	RL 50	Standard head length = 216 mm - Extended head length = 351 mm	**3010075**
	RL 64 MZ	Standard head length = 250 mm - Extended head length = 385 mm	**3010114**
		**SPACER KIT** If burner head penetration into the combustion chamber needs reducing, varying thickness spacers are available, as given in the following table.	
	RL 50	Spacer thickness S = 110 mm	**3010095**
	RL 64 MZ	Spacer thickness S = 135 mm	**3010129**
	All models	**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. Box type: C1/3 Dimensions: A = 650 mm, B (min-max) = 372-980 mm, C = 110 mm, D = 690 mm, E = 770 mm Average noise reduction according to EN 15036-1 Standard = 10 dB(A).	**3010403**
	All models	**DEGASING UNIT** With single pipe systems, you can find air in the oil sucked by the pump that comes from the oil itself due to negative pressure or to a faulty seal. To solve this problem, we recommend fitting a degasing unit near the burner. Kit code with filter; filtering degree 50 - 75 µm. Max capability 80 kg/h (more filters are needed for higher flow).	**3010055**
	RL 50	**CONNECTION FLANGE KIT** A kit is available for use where the burner opening on the boiler is of excessive diameter.	**3010138**
	RL 64 MZ	**VOLT FREE CONTACT KIT** A volt free contact kit is available for installation onto the burner. It can be used for a remote interface between burner operating signals. Every burner can be equipped with a single kit to remote the flame presence signal and the burner lockout indication.	**3010419**
	All models	**PROTECTION KIT (ELECTROMAGNETIC INTERFERENCES)** When the burner is installed in a room particularly subject to electromagnetic interference (signals emitted over 10 V/m) due for example to INVERTER presence or in systems where the lengths of the thermostat connections is over 20 meters, this specific protection kit is available as an interface between the thermostatic controls and the burner.	**3010386**
	All models	**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.	**3002719**

NOZZLES

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

Drawing	Burner model	Type	Specification				Note	Code
			GPH	Rated delivery (kg/h)				
				10 bar	12 bar	14 bar		
	RL 50	60°B	3.00	11.5	12.7	13.8	(1)	**3042158**
		60°B	3.50	13.5	14.8	16.1	(1)	**3042162**
	RL 50 - 64 MZ	60°B	4.00	15.4	17	18.4	(1)	**3042172**
		60°B	4.50	17.3	19.1	20.7	(1)	**3042182**
		60°B	5.00	19.2	21.2	23	(1)	**3042192**
		60°B	5.50	21.1	23.3	25.3	(1)	**3042202**
		60°B	6.00	23.1	25.5	27.7	(1)	**3042212**
		60°B	6.50	25	27.6	30	(1)	**3042222**
	RL 64 MZ	60°B	7.00	26.9	29.7	32.3	(1)	**3042232**
		60°B	7.50	28.8	31.8	34.6	(1)	**3042242**
		60°B	8.00	30.8	33.9	36.9	(1)	**3042252**
		60°B	8.50	32.7	36.1	39.2	(1)	**3042262**
		60°B	9.50	36.5	40.3	43.8	(1)	**3042282**
		60°B	10.00	38.4	42.4	46.1	(1)	**3042292**
		60°B	11.00	42.3	46.7	50.7	(1)	**3042312**
		60°B	12.00	46.1	50.9	55.3	(1)	**3042322**
		60°B	13.00	50	55.1	59.9	(1)	**3042332**

Drawing	Burner model	Type	Specification				Note	Code
			GPH	Rated delivery (kg/h)				
				10 bar	12 bar	14 bar		
	RL 64 MZ	60°B	14.00	53.8	59.4	64.5	(1)	**3042352**
		60°B	15.00	57.7	63.6	69.2	(1)	**3042362**
		60°B	16.00	61.5	67.9	73.8	(1)	**3042382**
		60°B	17.00	65.4	72.1	78.4	(1)	**3042392**

(1) Each burner needs N° 2 nozzles.

STATE OF SUPPLY

Monoblock forced draught oil burner with two stage operation, fully automatic, made up of:
– Air suction circuit lined with sound-proofing material
– Fan with reverse curve blades (RL 50 models) or straight blades (RL 64 MZ models)
– Air damper for air setting controlled by an adjustable hydraulic ram
– 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 vacuometer
  • internal by-pass for single pipe installation
– Valve unit with an oil safety valve and two delivery oil valves on the output circuit
– Photocell for flame detection
– Microprocessor-based burner safety control box, with diagnostic function
– Burner on/off switch
– Flame inspection window
– 1st - 2nd stage manual 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
– Fairleads for electrical connections (RL 50 models)
– 2 slide bar extensions (for the extended head models)
– Instruction handbook for installation, use and maintenance
– Spare parts catalogue