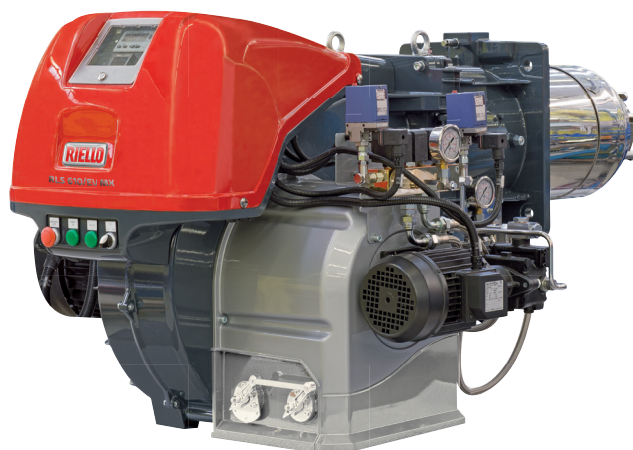


RLS 310÷610/E MX SERIES

The RLS/E-MX series of burners are characterised by a modular monoblock structure that means 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 1200 to 6155 kW, and they have been designed for use in hot water boilers, overheated water boilers as well as steam boilers. They are equipped with Siemens LMV26, which is able to manage the air-fuel ratio by independent servomotors in order to obtain a perfect output control and to assure a correct combustion and safe operation on all modulation range. Operation can be "two stage progressive" or alternatively "modulating" for both fuels, light oil and gas, with the installation of a PID logic regulator. The burner can, therefore, supply with precision the demanded power, guaranteeing an high efficiency system level and the stability setting, obtaining fuel consumption and operating costs reduction.

The combustion head guarantees reduced polluting emissions ($NO_x < 60 \text{ mg/kWh}$ on gas operation). An exclusive design guarantees low sound emissions, low electrical consumption, easy use and maintenance.

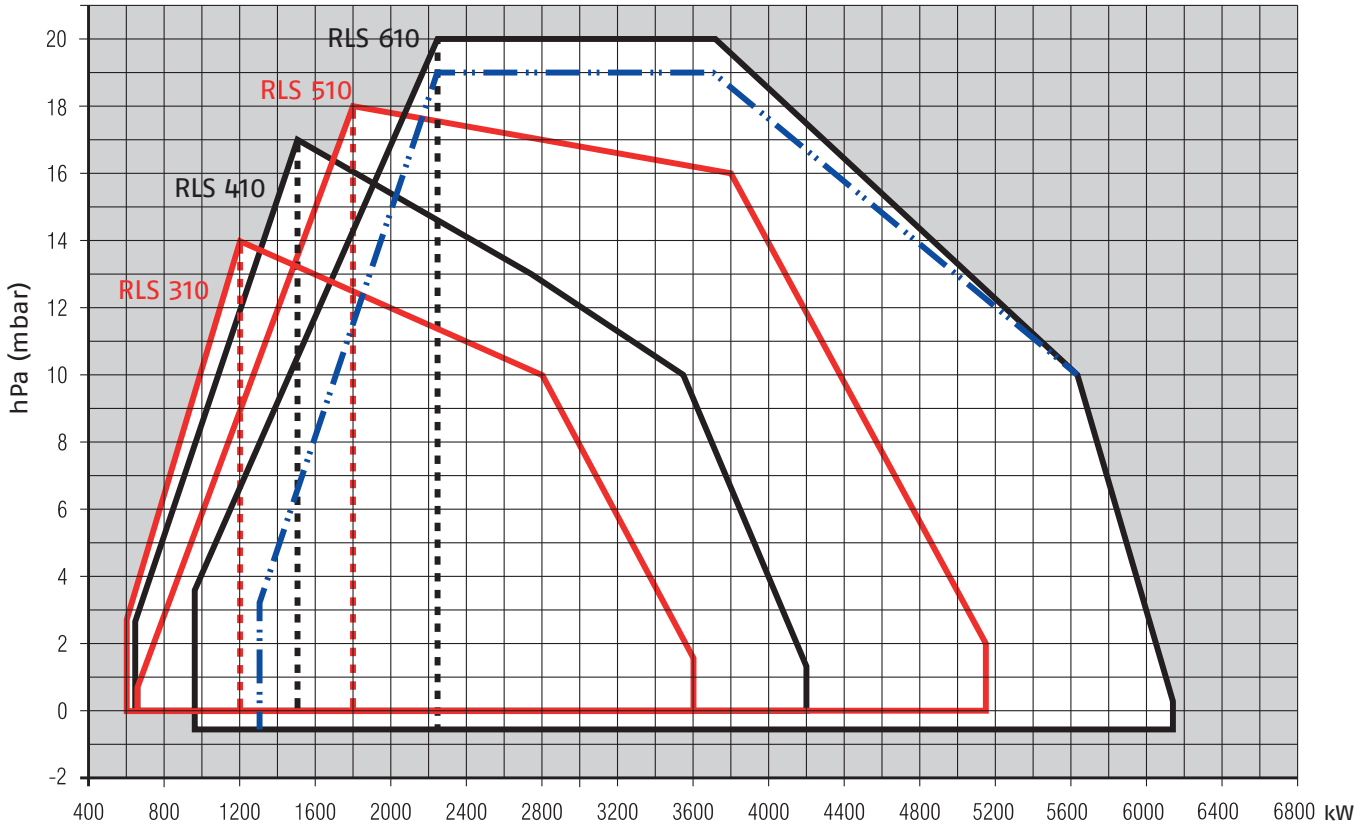


RLS 310/E MX	600/1200 ÷ 3600 kW
RLS 410/E MX	640/1500 ÷ 4200 kW
RLS 510/E MX	660/1800 ÷ 5170 kW
RLS 610/E MX	1000/2200 ÷ 6155 kW

Low NOx Modulating Dual Fuel Burners

RLS 310-610/E MX SERIES

FIRING RATES



Useful working field
for choosing the
burner



Modulation range

Test conditions
conforming to EN267-
EN676

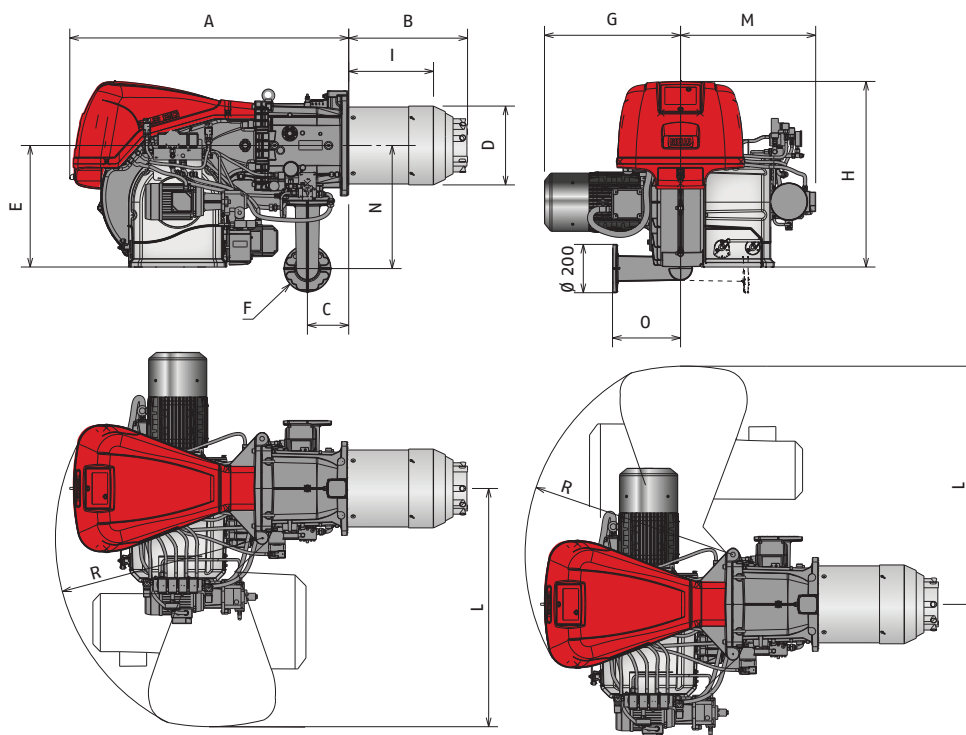
Temperature: 20°C
Pressure: 1013,5 mbar
Altitude: 0 m a.s.l.



Light-oil
firing rate
for RLS 610 model
(min. output 1.300 kW)

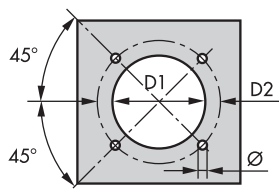
Overall dimensions (mm)

BURNER



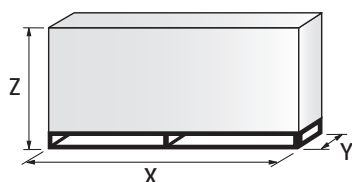
MODEL	A	B	C	D	E	F	G	H	I	L	M	N	O	R
▶ RLS 310/E MX	1190	507	178	313	520	DN65	490	790	340	1015	576	528	290	890
▶ RLS 410/E MX	1190	507	178	313	520	DN65	508	790	340	1015	576	528	290	890
▶ RLS 510/E MX	1190	507	178	313	520	DN65	508	790	340	1015	576	528	290	890
▶ RLS 610/E MX	1190	510	178	334	520	DN65	580	790	360	1015	576	528	290	890

BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	Ø
▶ RLS 310/E MX	335	452	M18
▶ RLS 410/E MX	335	452	M18
▶ RLS 510/E MX	335	452	M18
▶ RLS 610/E MX	350	452	M18

PACKAGING



MODEL	X	Y	Z	kg
▶ RLS 310/E MX	2040	1180	1125	300
▶ RLS 410/E MX	2040	1180	1125	300
▶ RLS 510/E MX	2040	1180	1125	300
▶ RLS 610/E MX	2400	1400	1595	320

Low NOx Modulating Dual Fuel Burners

RLS 310-610/E MX SERIES

Specification

DESIGNATION OF SERIES

Series: R										
Fuel:		S	Natural Gas							
		L	Light oil							
		LS	Light oil/Natural Gas							
		N	Heavy oil							
Size										
Setting:		/1	Single stage							
		/B	Two stage							
		/M	Modulating - Mechanical cam							
		/P	Proportioning air/gas valve							
		/E	Electronic cam							
		/EV	Electronic cam predisposed for variable speed (with inverter)							
Emission:		C11 or ...	Class 1 EN267 - EN676							
		C22 or MZ	Class 2 EN267 - EN676							
		C33 or BLU	Class 3 EN267 - EN676							
		C23 or MX	Class 2 EN267 - Class 3 EN676							
		C13	Class 1 EN267 - Class 3 EN676							
Head length:		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	3/220/60Hz - 3N/380V/60Hz							
Auxiliary voltage:		230/50-60	230V/50-60Hz							
		110/50-60	110V/50-60Hz							
R	LS	310	/E	MX	TC	FS1	3/400/50	230/50-60		
BASIC DESIGNATION										
EXTENDED DESIGNATION										

RLS 310-610/E MX SERIES

Specification

STATE OF SUPPLY

Monoblock forced draught dual fuel burners with modulating operation, fully automatic, made up of:

- High performance fan with low sound emissions, forward curve blades
- 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 2800 rpm, three-phase 230/400 - 400/690 V with neutral, 50Hz
- Separate light oil pump
- 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
- Maximum gas pressure switch, with pressure test point, for halting the burner in the case of over pressure on the fuel supply line
- Digital Burner management system for air/fuel setting; with output PID modulation control as accessory
- AZL Display Interface, for combustion system commissioning and monitoring
- LMV26 Electronic cam for controlling the system safety
- UV flame sensor
- Star/delta starter or direct starter
- Main electrical supply terminal board
- Burner on/off switch
- Auxiliary voltage led signal
- 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
- Gears pump for high pressure fuel supply
- Pump starting motor
- Oil safety valves
- Valve unit with double oil safety valve on the output circuit and double safety valve on the return circuit
- Oil/Gas selector
- Flame inspection window

Standard equipment:

- 1 flange gasket for gas train adaptor
- 1 adaptor for gas train
- 4 screws for fixing the flange
- 1 thermal screen
- 4 screws for fixing the burner flange to the boiler
- 2 flexible pipes for connection to the oil supply network
- 2 nipples for connection to the pump with gaskets
- 8 gas nozzles (only for RLS 310/E)
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

Low NOx Modulating Dual Fuel Burners

RLS 310-610/E MX SERIES

Available models

Burners

CODE	MODEL	HEAT OUTPUT			TOTAL ELECTRICAL POWER (kW)	CERTIFICATION
		(kW)	LIGHT OIL (kg/h)	NATURAL GAS (Nm ³ /h)		
20087643	RLS 310/E MX TC FS1 3/230/50	600/1200-3600	50/100-305	60/120-360	10,9 (oil) 9,1 (gas)	CE 0085CQ0196
20082946	RLS 310/E MX TC FS1 3/400/50	600/1200-3600	50/100-305	60/120-360	10,9 (oil) 9,1 (gas)	CE 0085CQ0196
20087644	RLS 310/E MX TC FS1 3/400/50	600/1200-3600	50/100-305	60/120-360	10,9 (oil) 9,1 (gas)	CE 0085CQ0196
20087645	RLS 410/E MX TC FS1 3/230/50	640/1500-4200	55/126-352	64/150-420	12,6 (oil) 10,8 (gas)	CE 0085CQ0196
20087646	RLS 410/E MX TC FS1 3/400/50	640/1500-4200	55/126-352	64/150-420	12,6 (oil) 10,8 (gas)	CE 0085CQ0196
20084376	RLS 410/E MX TC FS1 3/400/50	640/1500-4200	55/126-352	64/150-420	12,6 (oil) 10,8 (gas)	CE 0085CQ0196
20083562	RLS 510/E MX TC FS1 3/400/50	660/1800-5170	55/195-435	66/180-517	15,8 (oil) 14 (gas)	CE 0085CQ0196
20080180	RLS 610/E MX TC FS1 3/400/50	1000/2200-6155	86/185-516	100/220-615,5	18,8 (oil) 17 (gas)	CE 0085CQ0196

Net calorific value light oil: 11,8 kWh/kg; 10.200 kcal/kg - Viscosity at 20°C: 4-6 mm²/s (cSt).

Net calorific value G20 gas: 10 kWh/Nm³; 8.600 kcal/Nm³ - Density: 0,71 kg/Nm³.

The burners of RLS/E MX series are in according to 2009/142 EC - 2014/30/UE - 2014/35/UE - EC Directive and EN 267 - 676 Norm.

RLS/EV - /EVI models with Variable Speed Drive System are available on demand.

For more information, please contact Riello Burners Commercial and Technical Department.

RLS 310-610/E MX SERIES

Available models

Gas Trains

CODE	GAS TRAIN		ADAPTER CODE			
	MODEL	Ø	RLS 310	RLS 410	RLS 510	RLS 610
3970250*	MB 415/1 - RT 52	Rp 1" 1/2	3000826 + 20064220	●	●	●
3970257*	MB 420/1 - RT 52	Rp 2"	3000826 + 20042324	●	●	●
3970221*	MBC 1200/1 - RSM 60	Rp 2"	3000826 + 20042324			
3970222*	MBC 1900/1 - FSM 40	DN 65	3010221			
3970223*	MBC 3100/1 - FSM 40	DN 80	3010222			
3970224*	MBC 5000/1 - FSM 80	DN 100	3010222 - 3010370			
3970145*	CB 512/1 - RSM 30	Rp 1" 1/2	3000826 + 20064220		●	●
3970146*	CB 520/1 - RSM 30	Rp 2"	3000826 + 20042324			●
20044659*	CB 525/1 - RSM 30	Rp 2"	3000826 + 20042324			
3970147*	CB 5065/1 - FSM 30	DN 65	3010221			
3970148*	CB 5080/1 - FSM 30	DN 80	3010222			
3970149*	CB 50100/1 - FSM 30	DN 100	3010223 - 3010370			
20015871*	CB 50125/1 - FSM 30	DN 125	3010224			

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

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

** 230V/50Hz electrical supply.

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

The seal control function is managed by REC control box, by installation on gas train of a pressure switch (please see Gas train accessories paragraph).

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

● Not available.