

## RN SERIES

The RN series of burners covers a firing range from 228 to 1481 kW, and has been designed for use in hot or superheater water boilers, hot air or steam generators, diathermic oil boilers.

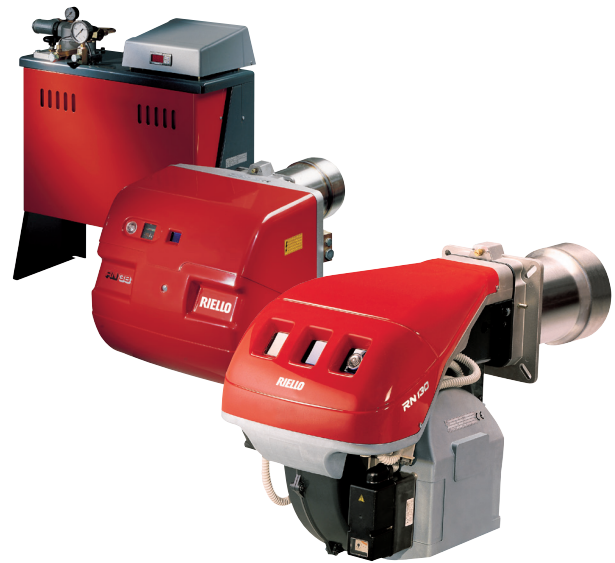
Operation is "two stage"; the burners are fitted with an electronic device LED PANEL, which supplies information about burner working.

All necessary components of hydraulic heavy-oil circuit are assembled in a separate structure, called BAG, for easy and fast installation.

Optimisation of sound emissions is guaranteed by the use of fans with forward curved blades and sound deadening material incorporated in the air suction circuit.

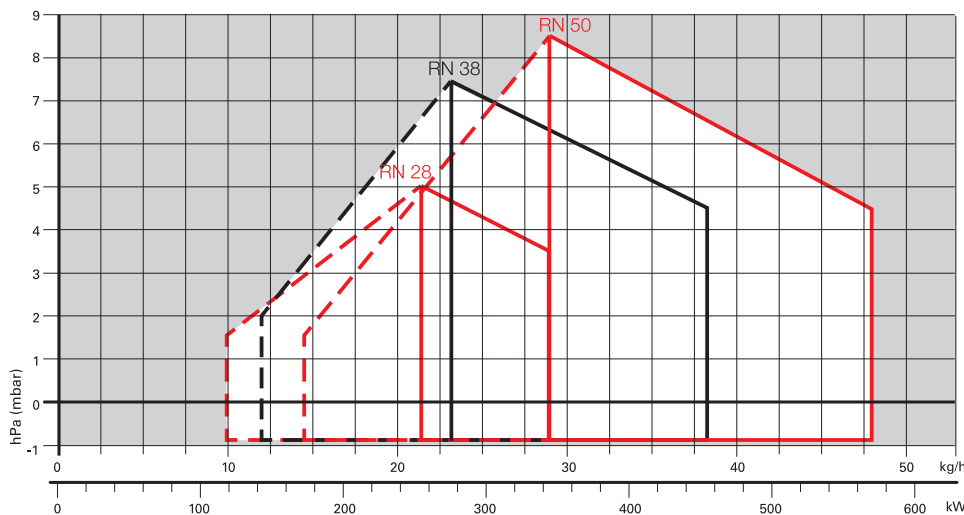
The elevated performance of the fans and combustion head, guarantee flexibility of use and excellent working at all firing rates.

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



RN 28	114/228 ÷	342 kW
RN 38	136/273 ÷	456 kW
RN 50	171/342 ÷	570 kW
RN 70	228/456 ÷	798 kW
RN 100	342/684 ÷	1140 kW
RN 130	456/912 ÷	1481 kW

## FIRING RATES

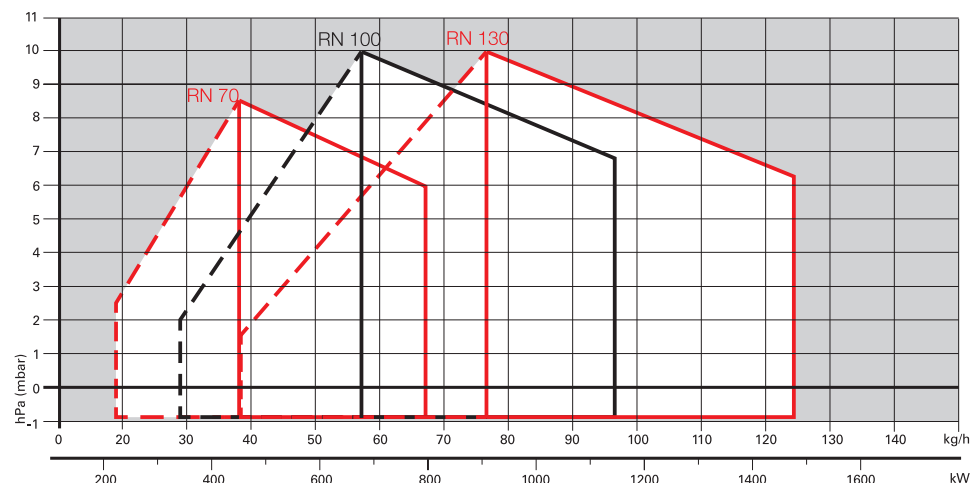


Useful working field for choosing the burner



1<sup>st</sup> stage operation range

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



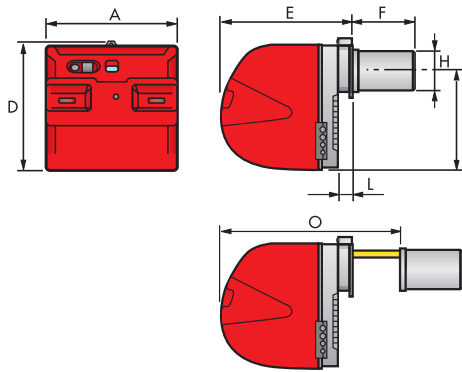
# Two Stage Heavy Oil Burners

## RN SERIES

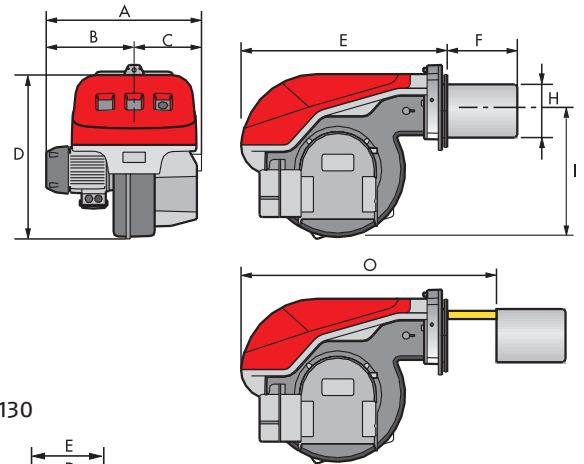
### Overall dimensions (mm)

#### BURNER

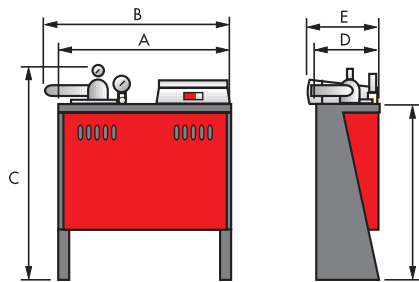
RN 28 - 38 - 50



RN 70 - 100 - 130

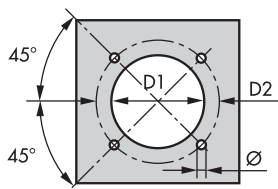


BAG 40 - 50 - 130



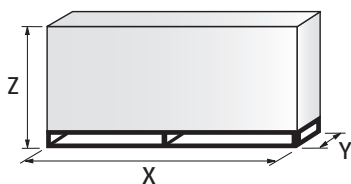
MODEL	A	B	C	D	E	F	H	I	L	O
▶ RN 28	476	-	-	474	468	265	166	352	52	730
▶ RN 38	476	-	-	474	468	265	166	352	52	730
▶ RN 50	476	-	-	474	468	265	166	352	52	730
▶ RN 70	511	296	215	555	680	310	189	430	-	951
▶ RN 100	527	312	215	555	680	330	200	430	-	951
▶ RN 130	553	338	215	555	680	330	220	430	-	951
▶ BAG 40 - 50 - 60	680	763	780	276	324	650	-	-	-	-

#### BURNER - BOILER MOUNTING FLANGE



MODEL	D1	D2	Ø
▶ RN 28 - 38 - 50	170	224	M8
▶ RN 70	200	275-325	M12
▶ RN 100	210	275-325	M12
▶ RN 130	230	275-325	M12

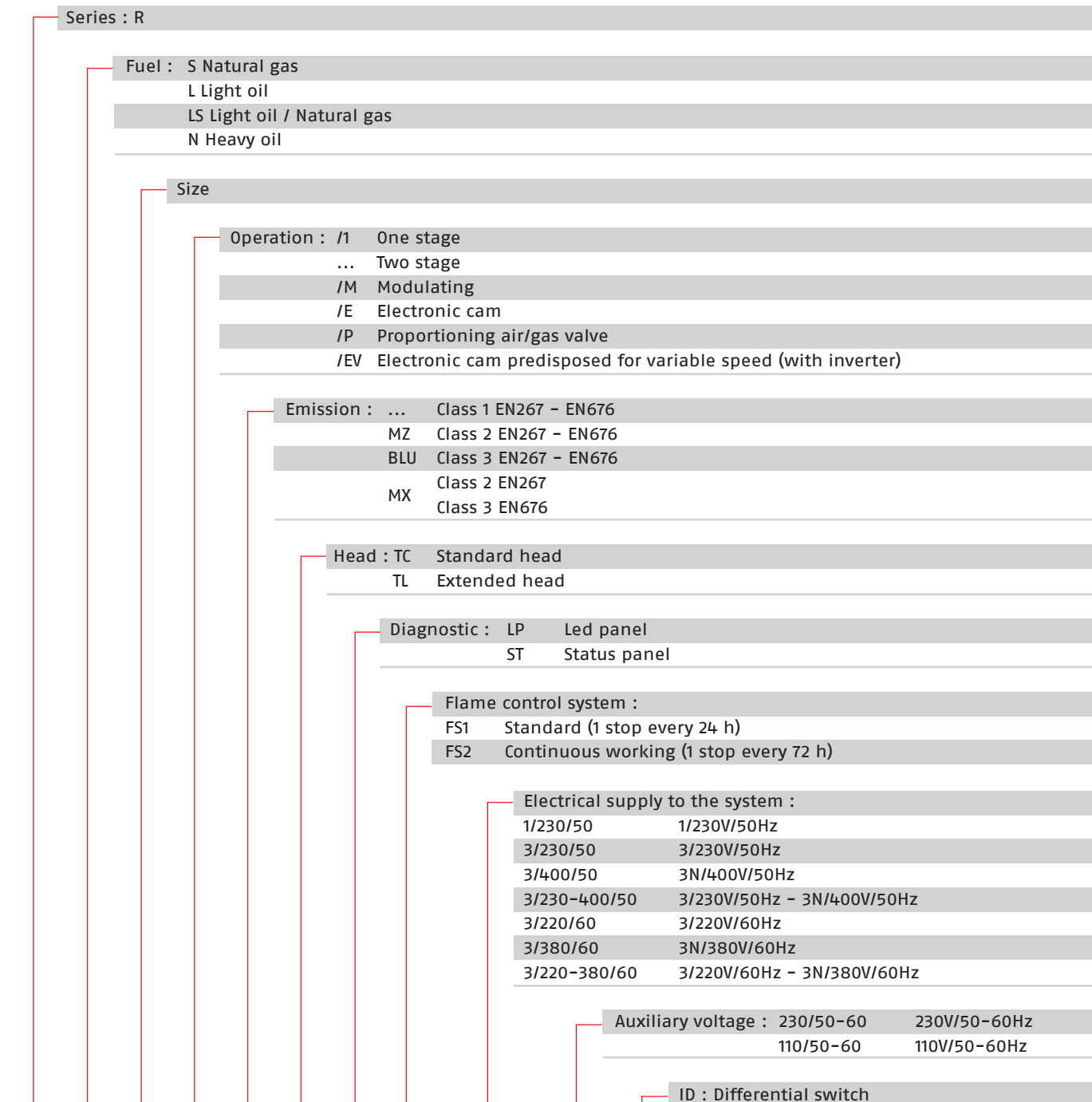
#### PACKAGING



MODEL	X	Y	Z	kg
▶ RN 28	1015	630	500	52
▶ RN 38 - 50	1015	630	500	57
▶ RN 70	1054	614	666	59
▶ RN 100	1054	614	666	62
▶ RN 130	1054	614	666	65
▶ BAG 40	824	859	394	62
▶ BAG 50	824	859	394	67
▶ BAG 130	824	859	394	69

# Specification

## DESIGNATION OF SERIES



R	N	50			TC	LP	FS1	3/230-400/50	230/50-60	
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BASIC DESIGNATION

EXTENDED DESIGNATION

# Two Stage Heavy Oil Burners

## RN SERIES

### Specification

#### STATE OF SUPPLY

Monobloc forced draught heavy oil burner, two stage operation, made up of:

- Air suction circuit lined with sound-proofing material
- Fan with reverse curve blades
- Air damper for air setting controlled by a servomotor
- Combustion head, that can be set on the basis of required output
- Photocell for flame detection
- Burner safety control box
- Electronic device to check all burners operational modes (Led Panel)
- Burner on/off switch
- Manual 1st and 2nd stage switch
- Plugs for electrical connections (RN 28-38-50)
- Flame inspection window
- Slide bars for easier installation and maintenance
- Protection filter against radio interference
- IP 44 electric protection level.

#### BAG

- Pressure gauge for fuel supply loop
- Atomising pressure gauge
- Self-controlling resistances for warming suction filter, delivery filter, valve and pump
- High and Low point thermostat
- High point thermostat with reset push-button
- Loop pressure control switch with burner operation enable (set at 1 bar)
- Pump
- Pump motor
- Pre-purge valve
- Degasing unit
- Valve for gas release from degasing unit
- Comb-filter at delivery
- Terminal strip
- Wiring looms
- Bag/Burner electrical connection socket
- Electronic thermostat
- Heating element Pt100
- Back pressure valve
- Comb-filter at pump suction
- Pre-heater.

#### Standard equipment:

- 2 flexible hoses for burner/bag connection (L = 1.3 m)
- 1 insulation for flexible hoses
- 2 nipples for flexible hoses
- 1 insulating screen
- 4 screws for fixing the burner flange to the boiler
- Wiring looms for electrical connections (for RN 28-38-50 model)
- 1 tube for installing BAG on left (for RN 28-38-50 model)
- 2 nozzles
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

# Two Stage Heavy Oil Burners

## RN SERIES

**RIELLO**

## Available models

CODE	MODEL						HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
							(kW)	(kg/h)			
3433201	RN 28	TC	LP	FS1	3/230-400/50	230/50-60	114/228-342	10/20-30	4	-	
3433301	RN 38	TC	LP	FS1	3/230-400/50	230/50-60	136/273-456	12/24-40	5	-	
3433401	RN 50	TC	LP	FS1	3/230-400/50	230/50-60	171/342-570	15/30-50	6	-	
3434101	RN 70	TC	LP	FS1	3/230-400/50	230/50-60	228/456-798	20/40-70	10	-	
3434201	RN 100	TC	LP	FS1	3/230-400/50	230/50-60	342/684-1140	30/60-100	10	-	
3434301	RN 130	TC	LP	FS1	3/230-400/50	230/50-60	456/912-1481	40/80-130	11	-	
3891510	BAG 40								3	-	(1)
3891511	BAG 50								4	-	(2)
3891512	BAG 130								8	-	(3)

(1) For RN 28 burner.

(2) For RN 38-50 burners.

(3) For RN 70-100-130 burners.

Net calorific value: 11,16 kWh/kg; 9.600 kcal/kg - Max Viscosity at 50°C: 20°E (150 mm<sup>2</sup>/s, cSt), Type BUNKER B / USA n° 5.

The burners of RN series are in according to 2004/108 - 2006/95 - 2006/42 EC Directive and EN 267 Norm.

# Two Stage Heavy Oil Burners

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### Burner accessories

#### Nozzle



#### TYPE F80 PL 45°

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

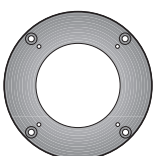
NOTE: each burner needs N° 2 nozzles.

BURNER	RATED DELIVERY (kg/h) at 22,5 bar	GPH	NOZZLE CODE
▶ RN 28	11,3	2	3043121
▶ RN 28 - RN 38	12,7	2,25	3043131
▶ RN 28 - RN 38	14,1	2,5	3043141
▶ RN 38 - RN 50	16,9	3	3043151
▶ RN 50 - RN 70	19,7	3,5	3043161
▶ RN 50 - RN 70	22,5	4	3043171
▶ RN 70	25,3	4,5	3043181
▶ RN 70 - RN 100	28,1	5	3043191
▶ RN 70 - RN 100	33,4	6	3043211
▶ RN 100 - RN 130	39,4	7	3043231
▶ RN 100 - RN 130	47,8	8,5	3043261
▶ RN 130	53,4	9,5	3043271
▶ RN 130	59	10,5	3043301

#### TYPE F80 PL 60°

BURNER	RATED DELIVERY (kg/h) at 22,5 bar	GPH	NOZZLE CODE
▶ RN 28	9,8	1,75	3041112
▶ RN 28	11,3	2	3043122
▶ RN 28 - RN 38	12,7	2,25	3043132
▶ RN 28 - RN 38	14,1	2,5	3043142
▶ RN 38 - RN 50	16,9	3	3043152
▶ RN 50 - RN 70	19,7	3,5	3043162
▶ RN 50 - RN 70	22,5	4	3043172
▶ RN 70	25,3	4,5	3043182
▶ RN 70 - RN 100	28,1	5	3043192
▶ RN 70 - RN 100	33,4	6	3043212
▶ RN 100 - RN 130	39,4	7	3043232
▶ RN 100 - RN 130	47,8	8,5	3043262
▶ RN 130	53,4	9,5	3043272
▶ RN 130	59	10,5	3043302

#### Connection flange kit



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

BURNER	KIT CODE
▶ RN 28 - RN 38 - RN 50	3010138