

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.

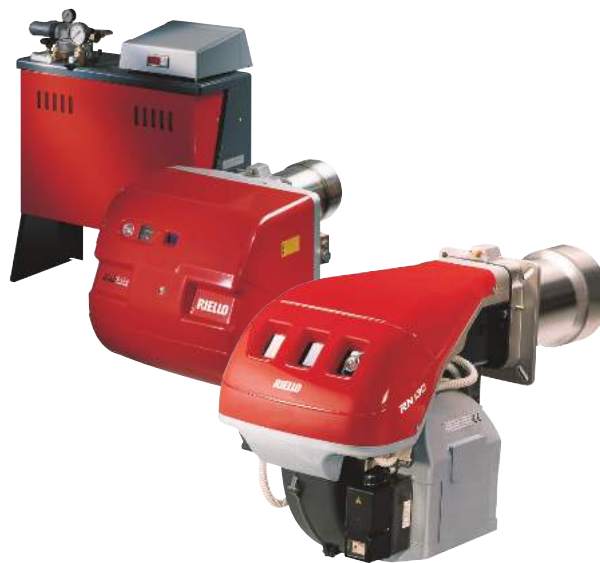
Operation is "two stage"; the burners are fitted with an electronic device LED PANEL, which supplies information about burner working.

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.

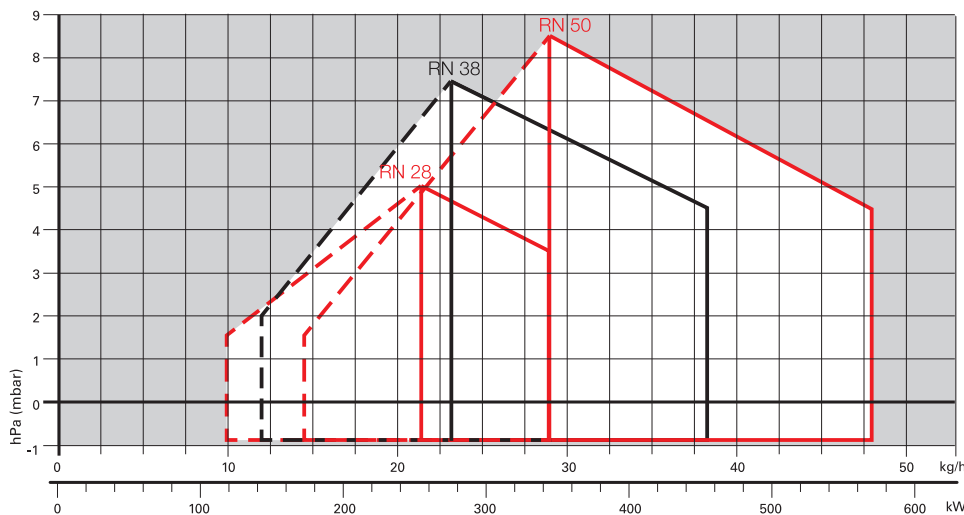
The exclusive design ensures reduced dimensions, simple use and maintenance. A wide range of accessories guarantees elevated working flexibility.



HEAVY OIL

| | | |
|--------|-----------|---------|
| 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

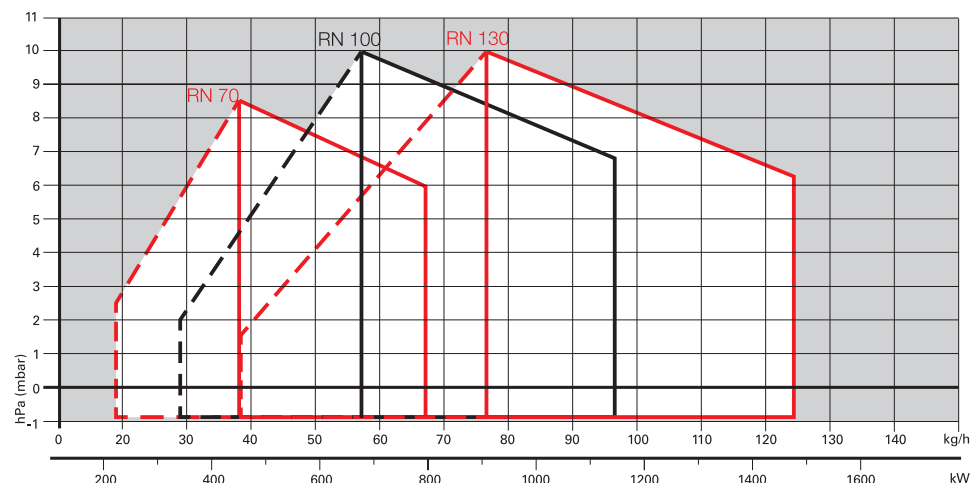


Useful working field for choosing the burner



1st stage operation range

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



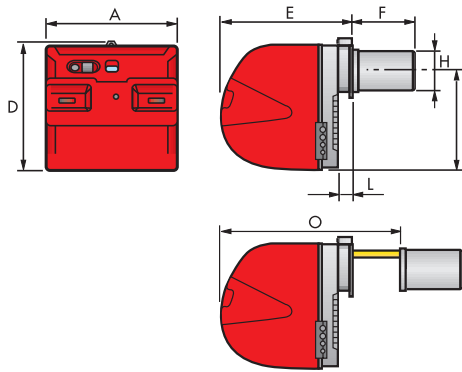
Two Stage Heavy Oil Burners

RN SERIES

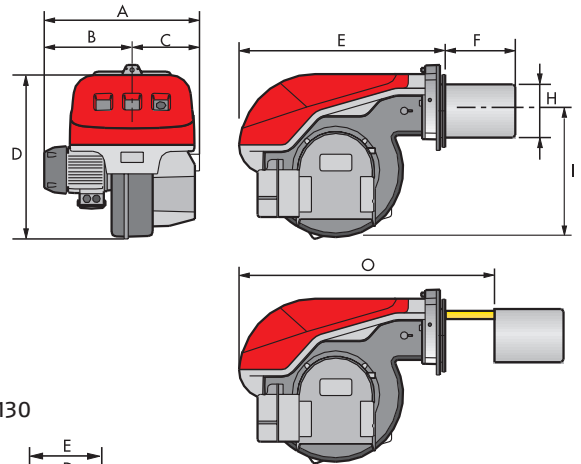
Overall dimensions (mm)

BURNER

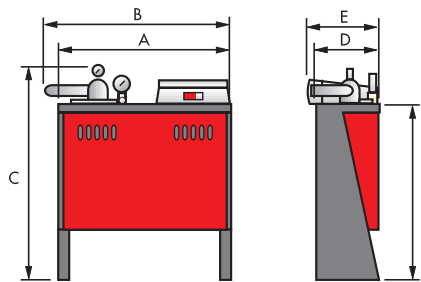
RN 28 - 38 - 50



RN 70 - 100 - 130

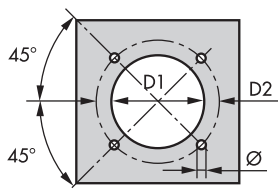


BAG 40 - 50 - 130



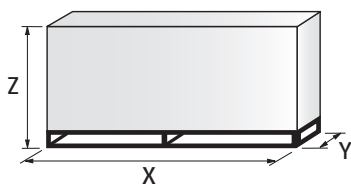
| MODEL | A | B | C | D | E | F | H | I | L | O |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|
| ▶ RN 28 | 476 | - | - | 474 | 468 | 265 | 166 | 352 | 52 | 730 |
| ▶ RN 38 | 476 | - | - | 474 | 468 | 265 | 166 | 352 | 52 | 730 |
| ▶ RN 50 | 476 | - | - | 474 | 468 | 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 |

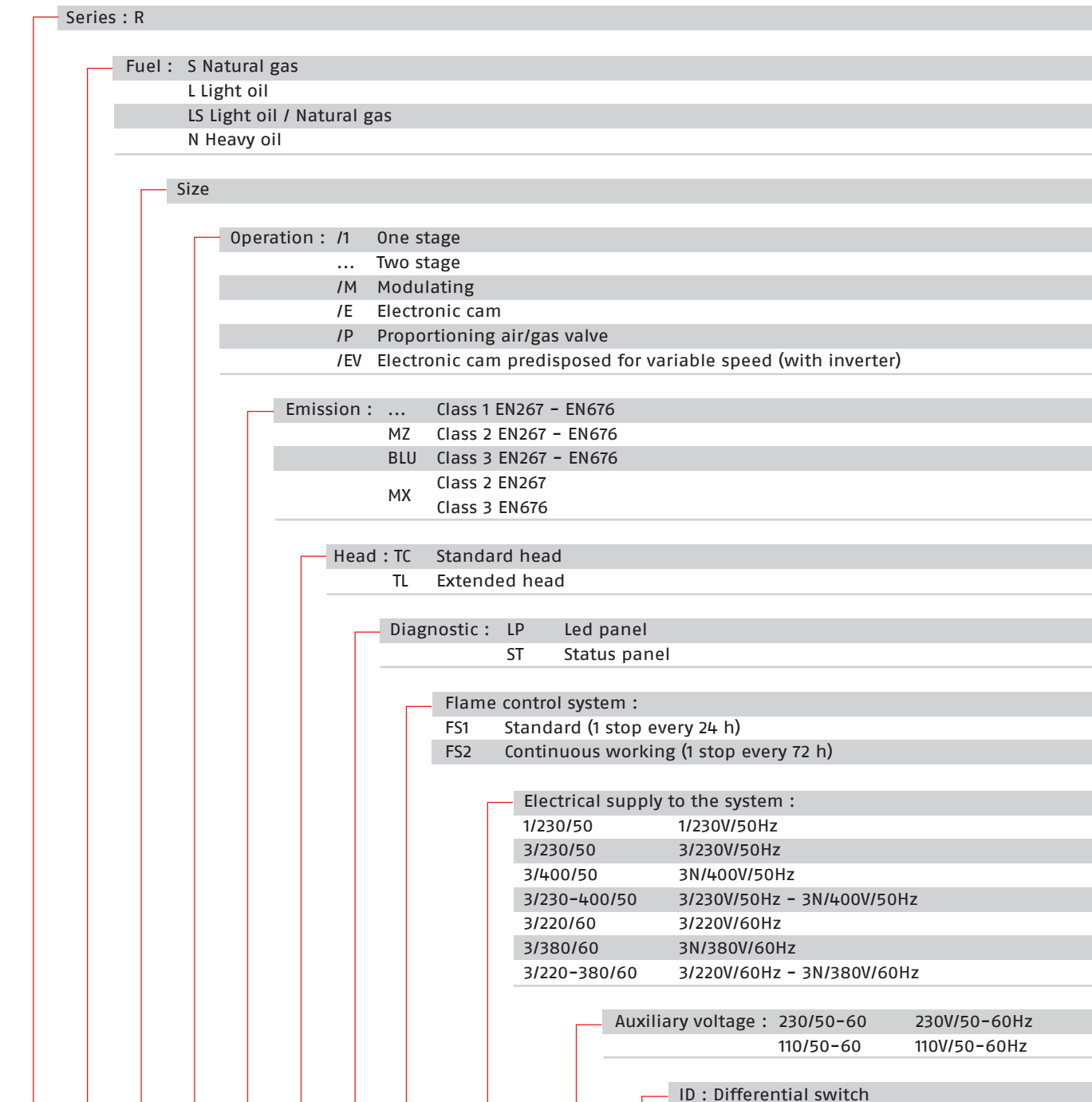
PACKAGING



| 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 | |
|---|---|----|--|--|----|----|-----|--------------|-----------|--|

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 mm²/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

RN SERIES

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.

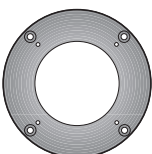
NOTE: each burner needs N° 2 nozzles.

| 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 |