

PRESS N Series

Two Stage Heavy Oil Burners

| PRESS 30N | 85/171 | ÷ | 342 | kW |
|------------|---------|---|------|----|
| PRESS 45N | 114/205 | ÷ | 513 | kW |
| PRESS 60N | 171/342 | ÷ | 684 | kW |
| PRESS 100N | 285/490 | ÷ | 1140 | kW |





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The PRESS N series of burners covers a firing range from 171 to 1140 kW and they have been designed for use in civil installations of average dimensions, like building areas and large apartment groups or for use in industrial applications, like small or medium plants.

Operation is two stage; a servomotor adjust automatically air damper opening, to obtain the right air delivery on both stage. The burners are fitted with a microprocessor control panel which supplies indication of operation and diagnosis of fault cause.

The combustion head, that can be set on the basis of required output, allows optimal performance ensuring good combustion and reducing fuel consumption and is available in two different length to be selected on the basis of specific application requirements.

In basic version the burners are supplied for use with heavy oil 7°E viscosity, but they can be supplied with higher viscosity oil with a specific heaters kit.

Simplified maintenance is achieved by the slide bar system, which allows easy access to all of the essential components of the combustion head.

A RIELLO burner (Heat Generator), where it is matched with a water-based boiler (Heater Housing) with a nominal output \leq 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, in conformity to Article 1, paragraph 2, point (G) of the EU Regulation No. 813/2013;

- With boilers (heater housings) on a new installation, put on the market after 26th of September 2015;

- With all new boilers (heater housings), where placed on the market before 26th of September 2015.

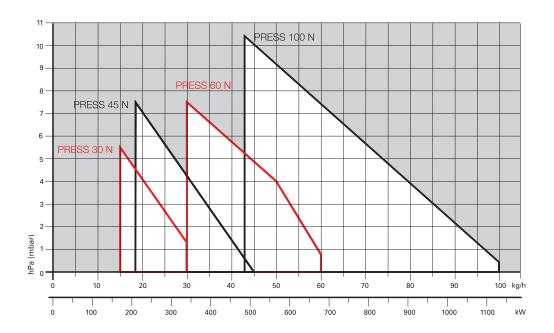
Technical Data

| MODEL | | | PRESS 30 N | PRESS 45 N | PRESS 60 N | PRESS 100 N | | | |
|-------------------------------------|-----------------------|--------------|---|-------------------|--------------------|-----------------|--|--|--|
| Burner o | peration mode | | Two stage | | | | | | |
| | ion ratio at max. ou | itput | 2 ÷ 1 | | | | | | |
| | . 1 | type | LKS 210 | | | | | | |
| Servomo | otor | run time s | 58 | | | | | | |
| | | kW | | | | | | | |
| Heat out | tput | Mcal/h | 73/147 ÷ 294 | 98/176 ÷ 441 | 147/294 ÷ 588 | 245/421 ÷ 980 | | | |
| | - | Kg/h | 7.5/15 ÷ 30 | 10/18 ÷ 45 | 15/30 ÷ 60 | 25/43 ÷ 100 | | | |
| Working | temperature | °C min./max. | | 0/ | 40 | | | | |
| FUEL/AIR DATA | | | | | | | | | |
| | not colorific value | | 11 | .4 | | | | | |
| Heavy oi | net calorific value | kcal/kg | | 98 | 300 | | | | |
| | viscosity at 20°C | mm²/s (cSt) | 50 (150 with l | heavy oil kit) | 50 (500 with | heavy oil kit) | | | |
| | type | | | Sui | ntec | | | | |
| Pump | delivery | Kg/h | 65 (at 2 | 20 bar) | 110 (at 20 bar) | 200 (at 20 bar) | | | |
| Atomise | Atomised pressure bar | | | | 20 | | | | |
| Fuel tem | perature | | 1/ | +0 | | | | | |
| Fuel pre- | • | | | Y | ES | | | | |
| Fan type | | | Се | ntrifugal with fo | rward tilted blad | es | | | |
| Air tempe | erature | max. °C | | | 50 | | | | |
| ELECTRIC | | | | | | | | | |
| Start up | | type | · · · · · · · · · · · · · · · · · · · | | Star – Delta | | | | |
| Electrical supply Ph/Hz/V | | | 1/50/230 ~ (± 10%) 3N/50/400 ~ (± 10%) 3/50/230 ~ (± 10%) | | | | | | |
| Auxiliary electrical supply Ph/Hz/V | | | 1/50/230 ~ (± 10%) | | | | | | |
| Control b | | RMO | | | | | | | |
| Total elec | trical power | type kW | 3.5 | 3.7 | 5.5 | 9.0 | | | |
| | electrical power | kW | 0.33 | 0.45 | 0.5 | 0.5 | | | |
| Protectio | | IP | 40 | | | | | | |
| | electrical power | kW | 0.37 | 0.45 | 0.75 | 1.5 | | | |
| Fan | rated current | A | 2.9 | 1.9 - 1.1 | 2.9 - 1.7 | 6 - 3.5 | | | |
| motor | start up current | A | 9.5 | 9.5 - 5.5 | 14 - 8 | 28 - 16 | | | |
| | protection level | IP | | | 54 | | | | |
| | electrical power | kW | | | - | | | | |
| Pump | rated current | A | | | | | | | |
| motor | start up current | A | | | | | | | |
| | protection level | IP | | - | - | | | | |
| | protection level | type | | | - | | | | |
| Ignition | transformer | V1 - V2 | | 220 V - 2 | | | | | |
| Ignition | uansionnei | | 230 V - 2 x 6.5 Kv | | | | | | |
| 0 | | 1 - 2 | 2 A - 35 mA Intermittent (at least one stop every 24h) | | | | | | |
| Operation | | | Inte | rmittent (at leas | t one stop every a | 24n) | | | |
| EMISSION | | | | 70 | | | | | |
| Noise | sound pressure | dB (A) | 75 | 78 | 81 | 83 | | | |
| levels | sound power | | 86 | 89 | 92 | 94 | | | |
| | CO emission | mg/kWh | | < | 50 | | | | |
| | grade of smoke | N° Bacharach | | < | 5 | | | | |
| Light oil | | | | | | | | | |
| | CxHy emission | mg/kWh | | | - | | | | |
| | N0x emission | mg/kWh | | < (| 650 | | | | |
| APPROVA | | | | | | | | | |
| Directive | | | 20 | | 30/UE - 2014/35/L | JE | | | |
| Conform | | | | | 267 | | | | |
| Certificat | tion | | | | | | | | |

Reference conditions: Temperature: 20°C – Pressure: 1013.5 mbar – Altitude: 0 m a.s.l. – Noise measured at a distance of 1 meter. Sound pressure measured in manufacturer's combustion laboratory, with burner operating on test boiler and at maximum rated output. The sound power is measured with the "Free Field" method, as per EN 15036, and according to an "Accuracy: Category 3" measuring accuracy, as set out in EN ISO 3746.

Firing Rates

PRESS 30-45-60-100 N





Test conditions conforming to EN267 Temperature: 20°C Pressure: 1013.5 mbar Altitude: 0 m a.s.l.



Fuel Supply

HYDRAULIC CIRCUIT

The burners are fitted with an oil pre-heater, a check valve and two delivery valves along the oil line from the pump to the nozzles.

The oil pre-heater is equipped with a filter with sheath forthermometer, a setting thermostat to adjust the oil temperature and two safety thermostats to control the max. and min. oil temperature.

A control device, on the basis of required output, regulates oil delivery valves opening, allowing oil passage trough the valves and the nozzles whose opening is regulated from a needle valve.

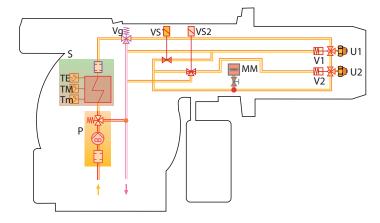
An oil delivery gauge allow to control the delivery pressure.

A specific version PRESS N/ECO is available for operation with low sulphur fuels; these models are made up of separated oil pump motor at 1400 rpm and double filter between pump and nozzle.

For heavy oil preheating, a special kit could be used; equipped with electrical heaters, it permits the use of PRESS N and PRESS N/ECO burners with fuel oil of max. viscosity 23°E at 50°C (PRESS 30 N - 45 N) or 50°E at 50°C (PRESS 60 N - 100 N), (see Burner Accessory paragraph).



Hydraulic circuit



| ММ | Oil delivery gauge |
|-----|---|
| Ρ | Pump with filter and pressure regulator on the output circuit |
| S | Oil preheater with filter, maximum, minimum and regulation thermostat |
| TE | 0il temperature regulator |
| Tm | Minimum oil temperature switc |
| тм | Max oil temperature switch |
| U1 | 1st stage nozzle |
| U2 | 2nd stage nozzle |
| Vg | Check valve |
| VS1 | 1st stage delivery valve |
| VS2 | 2nd stage delivery valve |
| V1 | 1st stage nozzle needle valve |
| V2 | 2nd stage nozzle needle valve |

SELECTING THE FUEL SUPPLY LINES

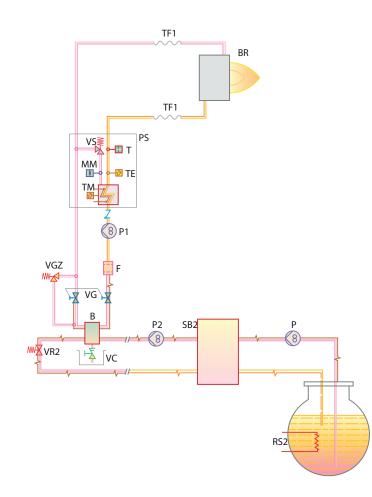
The fuel feed must be completed with the safety devices required by the local regulations in force. IMPORTANT NOTES

- The oil could easily flow through the pipes if those are properly sized, protected and heated (by electricity, steam or hot water)

- In order to limit gas or steam production the oil pressure into the gas separator shall be set in function of the supply temperature, see instructions manual.

- The forwarding pump should have at least a double capacity than that one of the burner.

For several burners supplied through the same ring supply line, the forwarding pump should have a capacity of approximatively 30% more than the sum of the single burners outputs.

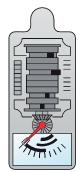


| В | Gas separator bottle |
|-----|---|
| BR | Burner |
| F | 0il filter |
| ММ | 0il delivery gauge |
| Р | Double pumping unit with filter and heater on transfer ring |
| PS | Electrical preheater |
| P1 | Pump with heater – burner circuit |
| P2 | Double pumping unit with filter and heater on main ring |
| RS2 | Tank heater |
| SB2 | Service tank |
| т | Thermometer |
| TE | Temperature switch regulation |
| TF1 | Flexible oil line |
| ТМ | Max oil temperature switch |
| VC | Vent valve |
| VGZ | Safety valve – burner circuit |
| VR2 | 0il valve – main ring |
| VS | Preheater safety valve |



Ventilation

The ventilation circuit of PRESS N burners is inserted in a extremely compact structure and it is provided with a forward blades centrifugal fan, which guarantees high pressure levels at the required air deliveries and permits installation flexibility. A servomotor adjust automatically air damper opening, to obtain the right air delivery on both stage.



Servomotor for air regolation

Combustion Head

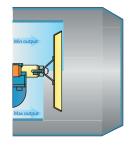
Two different lenghts of the combustion head can be chosen for the various models of the PRESS N series of burners.

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

Depending on the type of heat generator, it is necessary to check the correct head penetration into the combustion chamber.

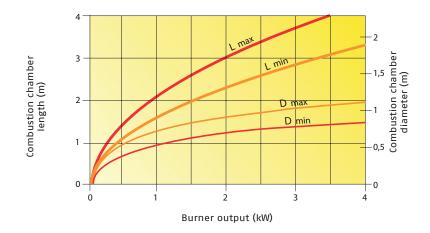
The internal position of the combustion head can easily be adjusted: refer to the burner instruction manual for the complete procedure.

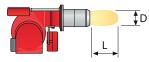
The following diagram shows the flame dimensions in relation to the burner output. The lenght and diameter shown in the diagram below should be employed preliminary check: it is required a more careful investigation if combustion chamber dimensions are much different from the above reported values.



Combustion head

SUGGESTED COMBUSTION CHAMBER DIMENSIONS





Example:

Burner thermal output = 2000 kW; L Combustion Chamber (m) = 2.7 m (medium value); D Combustion Chamber (m) = 0.8 m (medium value)

PRESS N Series

Operation

BURNER OPERATION MODE

With two stage operation, the PRESS N burners can follow the temperature load requested by the system. A modulation ratio of 2:1 is reached, thanks to the "two nozzles" technique; the air is adapted to the servomotor positions.

On "two stage" operation, the burner gradually adjusts output to the requested level, by varying between the two pre-set levels.

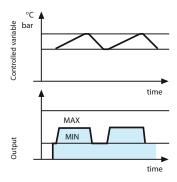
All PRESS N series burners are fitted with a new microprocessor control panel for the supervision during intermittent operation. For helping the commissioning and maintenance work, there are two main elements:



The lock-out reset button is the central **operating element** for resetting the burner control and for activating / deactivating the diagnostic functions.

Both elements are located under the transparent cover of lock-out reset button, as showed below.

"TWO STAGE" OPERATION





The multi-color LED is the central **indication element** for visual diagnosis and interface diagnosis.



There are two diagnostic choices, for indication of operation and diagnosis of fault cause:

VISUAL DIAGNOSIS



INTERFACE DIAGNOSIS

By the interface adapter and a PC with dedicated software or by a predisposed flue gas analyzer (see paragraph accessories).





INDICATION OF OPERATION

In normal operation, the various status are indicated in the form of colour codes according to the table below.

The interface diagnosis (with adapter) can be activated by pressing the lock-out button for over 3 seconds.

| COLOR CODE TABLE | | | | | | | |
|-----------------------------------|---|--|--|--|--|--|--|
| Operation status Color code table | | | | | | | |
| Stand-by | | | | | | | |
| Pre-purging | $\bigcirc \bigcirc $ | | | | | | |
| Ignition phase | | | | | | | |
| Flame OK | $\bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet$ | | | | | | |
| Poor flame | | | | | | | |
| Undervoltage, built-in fuse | $\bigcirc \bigcirc $ | | | | | | |
| Fault, alarm | $\bullet \bullet $ | | | | | | |
| Flame simulation | | | | | | | |

LED off

DIAGNOSIS OF FAULT CAUSES

After lock-out has occurred, the red signal lamp is steady on. In this status, the visual fault diagnosis according to the error code table can be activated by pressing the lock-out reset button for over 3 seconds. The interface diagnosis (with adapter) can be activated by pressing again the lock-out button for over 3 seconds.

The flashing of red LED are a signal with this sequence: (e.g. signal with n° 3 flashes – faulty air pressure monitor)



ERROR CODE TABLE

| POSSIBLE CAUSE OF FAULT | | FLASH CODE | |
|--|--|--------------|--|
| No establishment of flame at the end of safety time: | faulty or soiled fuel valves faulty or soiled flame detector poor adjustment of burner, no fuel faulty ignition equipment | O 2x flashes | |
| Faulty air pressure monitor | | 3x flashes | |
| Extraneous light or simulation of flame on burner start up | | 4x flashes | |
| Loss of flame during operation: | – faulty or soiled fuel valves – faulty or soiled flame detector – poor adjustment of burner | 7x flashes | |
| Faulty control box | | 10x flashes | |

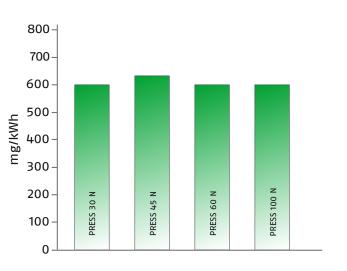
Two Stage Heavy Oil Burners

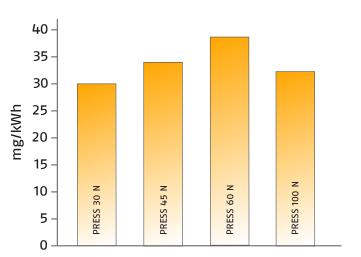
PRESS N Series

Emissions

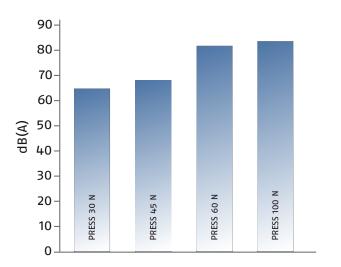
The emission data has been measured in the various models at maximum output, according to EN 267 standard.

NO₂ EMISSIONS





NOISE EMISSIONS



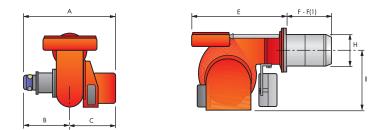
CO EMISSIONS

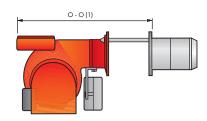


Overall Dimensions (mm)

These models are distinguished by their reduced size, in relation to their outputs, which means they can be fitted to any boiler on the market.

BURNER

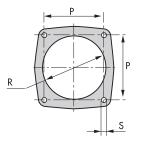




| MODEL | А | В | С | Е | F – F(1) | Н | I | 0 - 0 (1) |
|-------------|-----|-----|-----|-----|-----------|-----|-----|-------------|
| PRESS 30 N | 625 | 335 | 290 | 625 | 185 - 320 | 161 | 305 | 905 - 1080 |
| PRESS 45 N | 625 | 335 | 290 | 625 | 235 - 370 | 161 | 305 | 925 - 1100 |
| PRESS 60 N | 625 | 335 | 290 | 660 | 245 - 400 | 172 | 335 | 940 - 1115 |
| PRESS 100 N | 625 | 335 | 290 | 710 | 250 - 410 | 195 | 370 | 1010 - 1195 |

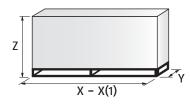
(1) Length with extended combustion head

BURNER – BOILER MOUNTING FLANGE



| MODEL | Р | R | S |
|-------------|-----|-----|------|
| PRESS 30 N | 160 | 170 | M 10 |
| PRESS 45 N | 160 | 170 | M 10 |
| PRESS 60 N | 160 | 180 | M 10 |
| PRESS 100 N | 195 | 205 | M 12 |

PACKAGING



| MODEL | X - X(1) | Y | Z | kg |
|-------------|-------------|-----|-----|-----|
| PRESS 30 N | 1000 - 1015 | 790 | 550 | 84 |
| PRESS 45 N | 1000 - 1200 | 790 | 550 | 84 |
| PRESS 60 N | 925 - 1200 | 790 | 650 | 87 |
| PRESS 100 N | 1000 - 1200 | 790 | 650 | 104 |

(1) Length with extended combustion head

Installation Description

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

A nozzle is fitted to the burner and used for fire tests in the factory. If necessary, change the nozzle on the basis of the maximum output of the boiler.

All operations must be carried in accordance with the technical handbook supplied with the burner.

BURNER SETTING

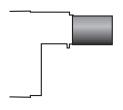
- ▶ All the burners have slide bars, for easier installation and maintenance.
- After drilling the boilerplate, using the supplied gasket as a template, dismantle the blast tube from the burner and fix it to the boiler.
- ▶ Adjust the combustion head.
- Refit the burner casing to the slide bars.
- Install the nozzles, choosing these 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.
- On start up, check:
 - Pressure pump (to max. and min.)
 - Combustion quality, in terms of unburned substances and excess air.

Burner accessories

EXTENDED HEAD KIT



"Standard head" burners can be transformed into "extended head" versions, by using the special kit. The KITS available for the various burners, giving the original and the extended lengths, are listed below.

| BURNER STANDARD HEAD LENGTH (mm) | | EXTENDED HEAD LENGTH (mm) | CODE | | |
|-------------------------------------|-----|------------------------------|----------|--|--|
| PRESS 30 N | 185 | 320 | 20015280 | | |
| PRESS 60 N | 245 | 400 | 3092198 | | |

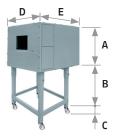
SPACER KIT



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

| BURNER | SPACER THICKNESS S (mm) | CODE | | |
|----------------------|----------------------------|---------|--|--|
| PRESS 30 - 45 - 60 N | 142 | 3000755 | | |
| PRESS 100 N | 142 | 3000802 | | |

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 | | D (mm) | E (mm) | [dB(A)] (*) | CODE |
|--------------------------------------|-------------|-----------|-------------------|-----|-----------|-----------|----------------|---------|
| PRESS 30 - 45 - <u>60 - 100 N</u> | C4/5 | 650 | 372 - 980 | 110 | 980 | 930 | 10 | 3010404 |

(*) Average noise reduction according to EN 15036-1 standard

SELF-CLEANING FILTER



For cleaning heavy oil from dirty particles and impurities, it is equipped with a thermostatic heater for oil with 50°E viscosity at 50°C.

| FILTER TYPE | CODE |
|-------------------------|---------|
| ø=1 50°E – 50°C | 3000790 |
| HEATER TYPE | CODE |
| Thermostatic heater 80W | 3010059 |

HEAVY OIL KIT



Equipped with electrical heaters, it permits the employment of PRESS N burners with fuel oil of max. viscosity 20°E at 50°C (type BUNKER B / USA n° 5).

| BURNER | MAX VISCOSITY | CODE | |
|------------------|---------------|---------|--|
| PRESS 30 - 45 N | 20°E at 50°C | 3000797 | |
| PRESS 60 - 100 N | 20°E at 50°C | 3010013 | |

CARTRIDGE FILTER



For cleaning heavy oil from dirty particles and impurities, it is equipped with a cartridge system equipped with electronic resistance for oil with 7°E viscosity at 50°C.

| FILTER TYPE | CODE |
|-----------------------------|---------|
| Cartridge filter 7°E – 50°C | 3005209 |

THERMOSTATS



Thermostats allow heavy oil temperature control and regulation during burner operation. They are available in electronic and maximum versions.

| BURNER | THERMOSTAT TYPE | CODE |
|----------------------------|--------------------|---------|
| PRESS 30 - 45 - 60 - 100 N | Kit electronic | 3000799 |
| PRESS 30 - 45 - 60 - 100 N | Maximum | 3000800 |
| PRESS 30 - 45 - 60 - 100 N | Kit electronic | 3010173 |

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.

| BURNER | CODE |
|----------------------------|---------|
| PRESS 30 - 45 - 60 - 100 N | 3002719 |

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.

| BURNER | CODE |
|------------|---------|
| ALL MODELS | 3010386 |

NOZZLE



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.

TYPE F80 PL 45°

| ED DELIVERY h) at 20 bar | GPH | CODE |
|-----------------------------|--|---|
| | | CODE |
| 10,6 | 2 | 3043121 |
| 11,9 | 2,25 | 3043131 |
| 13,2 | 2,5 | 3043141 |
| 15,8 | 3 | 3043151 |
| 18,5 | 3,5 | 3043161 |
| 21,1 | 4 | 3043171 |
| 23,7 | 4,5 | 3043181 |
| 26,4 | 5 | 3043191 |
| 29 | 5,5 | 3043201 |
| 31,7 | 6 | 3043211 |
| 34,3 | 6,5 | 3043221 |
| 36,9 | 7 | 3043231 |
| 39,6 | 7,5 | 3043241 |
| 44,8 | 8,5 | 3043261 |
| | 10,6 11,9 13,2 15,8 18,5 21,1 23,7 26,4 29 31,7 34,3 36,9 39,6 | 10,6 2 11,9 2,25 13,2 2,5 15,8 3 18,5 3,5 21,1 4 23,7 4,5 26,4 5 29 5,5 31,7 6 34,3 6,5 36,9 7 39,6 7,5 |

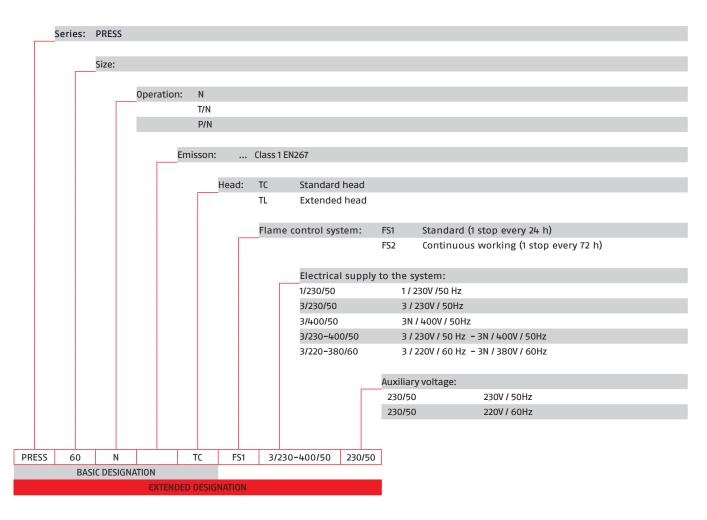
TYPE F80 PL 60°

| BURNER | RATED DELIVERY (kg/h) at 20 bar | GPH | CODE |
|---------------------------|------------------------------------|------|---------|
| PRESS 30 N | 6,6 | 1,25 | 3041092 |
| PRESS 30 N - 45 N | 7,9 | 1,5 | 3041102 |
| PRESS 30 N - 45 N | 9,2 | 1,75 | 3041112 |
| PRESS 30 N - 45 N | 10,6 | 2 | 3043122 |
| PRESS 30 N - 45 N | 11,9 | 2,25 | 3043132 |
| PRESS 30 N - 45 N - 60 N | 13,2 | 2,5 | 3043142 |
| PRESS 45 N - 60 N | 15,8 | 3 | 3043152 |
| PRESS 45 N - 60 N - 100 N | 18,5 | 3,5 | 3043162 |
| PRESS 45 N - 60 N - 100 N | 21,1 | 4 | 3043172 |
| PRESS 60 N - 100 N | 23,7 | 4,5 | 3043182 |
| PRESS 60 N - 100 N | 26,4 | 5 | 3043192 |
| PRESS 100 N | 29 | 5,5 | 3043202 |
| PRESS 100 N | 31,7 | 6 | 3043212 |
| PRESS 100 N | 34,3 | 6,5 | 3043222 |
| PRESS 100 N | 36,9 | 7 | 3043232 |
| PRESS 100 N | 39,6 | 7,5 | 3043242 |
| PRESS 100 N | 44,8 | 8,5 | 3043262 |

Specification

DESIGNATION OF SERIES

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



AVAILABLE BURNER MODELS

| BURNER MODELS | | HEAT OUTPUT | | TOTAL ELECTRICAL POWER | CERTIFICATION | NOTE |
|---------------|---------------------|----------------|--------------------|------------------------------|---------------|------|
| | | (KW) | (Kg/h) | (KW) | - | |
| PRESS 30 N | 1/230/50 230/50 | 85/171 - 342 | 7.5/15 - 30 | 3.4 | - | (1) |
| PRESS 30 N | 1/230/50 230/50 | 85/171 - 342 | 7.5/15 - 30 | 3.4 | - | (1) |
| PRESS 30 N | 3/220-380/60 220/60 | 85/171 - 342 | 7.5/15 - 30 | 3.7 | - | |
| PRESS 30 N | 3/220-380/60 220/60 | 85/171 - 342 | 7.5/15 - 30 | 3.7 | - | |
| PRESS 45 N | 3/230-400/50 230/50 | 114/205 - 513 | 10/18 - 45 | 3.6 | - | (1) |
| PRESS 45 N | 3/230-400/50 230/50 | 114/205 - 513 | 10/18 - 45 | 3.6 | - | (1) |
| PRESS 45 N | 3/220-380/60 220/60 | 114/205 - 513 | 10/18 - 45 | 3.7 | - | |
| PRESS 45 N | 3/220-380/60 220/60 | 114/205 - 513 | 10/18 - 45 | 3.7 | - | |
| PRESS 60 N | 3/230-400/50 230/50 | 171/342 - 684 | 15/30 - 60 | 5.5 | - | (1) |
| PRESS 60 N | 3/230-400/50 230/50 | 171/342 - 684 | 15/30 - 60 | 5.5 | - | (1) |
| PRESS 60 N | 3/220-380/60 220/60 | 171/342 - 684 | 15/30 - 60 | 5.8 | - | |
| PRESS 60 N | 3/220-380/60 220/60 | 171/342 - 684 | 15/30 - 60 | 5.8 | - | |
| PRESS 100 N | 3/230-400/50 230/50 | 285/490 - 1140 | 25/43 - 100 | 9.0 | - | (1) |
| PRESS 100 N | 3/230-400/50 230/50 | 285/490 - 1140 | 25/43 - 100 | 9.0 | - | (1) |
| PRESS 100 N | 3/220-380/60 220/60 | 285/490 - 1140 | 25/43 - 100 | 9.0 | - | |
| PRESS 100 N | 3/220-380/60 220/60 | 285/490 - 1140 | 25/43 - 100 | 9.0 | - | |

Net calorific value: 11,3 kWh/kg; 9720 kcal/kg - Max Viscosity at 50°C: 5°E (38 mm²/s, cSt), Type MEDIUM HEAVY OIL / USA n° 4. (1) Austrian version.



STATE OF SUPPLY

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

- Air suction circuit
- Fan with forward curved blades
- Air dampers for air setting controlled by a servomotor
- Starting motor at 2850 rpm
- Combustion head, 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 a double oil safety valve on the output circuit;
- Oil preheater provided with chance of a thermometer application for temperature control;
- Servomotor for air damper regulation;
- Photocell for flame detection;
- Microprocessor-based burner safety control box, with diagnostic function
- Flame inspection window
- Slide bars for easier installation and maintenance
- Protection filter against radio interference
- IP XOD (IP 40) protection level

Standard equipment:

- 2 flexible hoses for pipe connection
- 2 gaskets for flexible hoses
- 2 nipples for flexible hoses
- 1 thermal insulation screen
- 4 screws for fixing the burner flange to the boiler
- 2 nozzles (see table of available burner model)
- 2 extensions for bars (for long head version)
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue

Conforming to:

- 2014/30 UE Directive (electromagnetic compatibility)
- 2014/35 UE Directive (low voltage)
- 2006/42 EC Directive (machine)
- EN 267 (liquid fuel burners)

Available accessories to be ordered separately:

- Extended head kit
- Spacer kit
- Sound proofing box
- Self cleaning filter
- Heavy oil kit
- Cartridge filter
- Thermostat
- PC Interface kit
- Protection kit (electromagnetic interferences)
- Nozzle

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





[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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