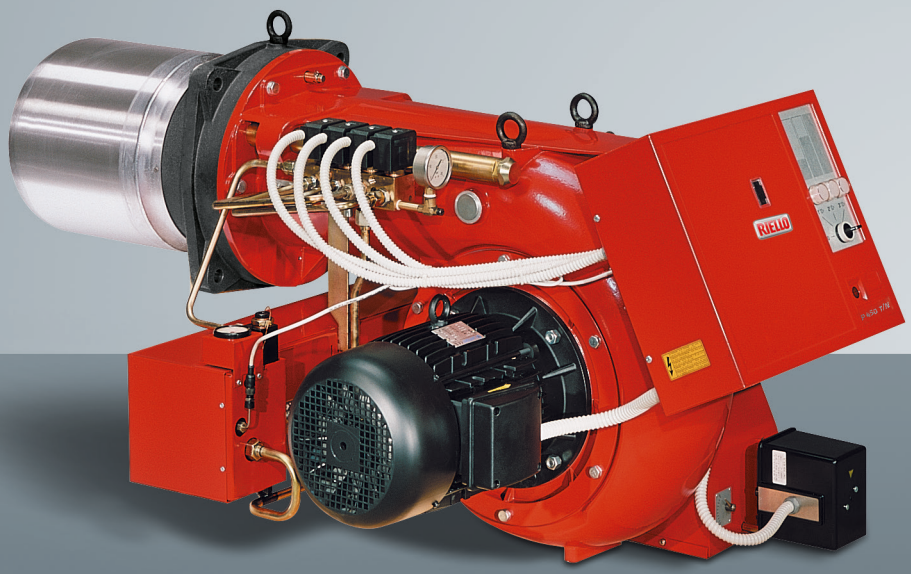
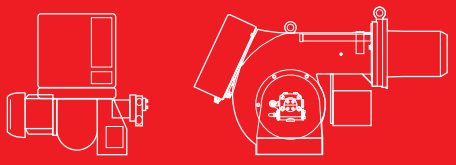


PRESS T/N – TN ECO Series

Three Stage Heavy Oil Burners

P 140 T/N	320/800	÷	1600	kW
P 200 T/N	515/1140	÷	2280	kW
P 300 T/N	626/1710	÷	3420	kW
P 450 T/N	855/2560	÷	5130	kW
P 140 T/N ECO	320/800	÷	1600	kW
P 200 T/N ECO	515/1140	÷	2280	kW
P 300 T/N ECO	626/1710	÷	3420	kW
P 450 T/N ECO	855/2560	÷	5130	kW



The PRESS T/N series of burners covers a firing range from 800 to 5130 kW. They have been designed in three versions for use in commercial and industrial installations, to burn different oil viscosity from 7 up to 60 °E @ 50°C. Operation is three-stage, thus making these burners suitable for installations that have variable but predictable heating requirments.
A servomotor adjusts automatically air damper to the opening value, determined to obtain always the necessary fuel consumption. Every model of PRESS T/N series is available in two different combustion head lenght (short or long head) to be selected on the basis of specific application requirments. An electric preheater has been fitted to maintain the oil at the correct atomising temperature at maximum ouput and special heaters kits are separately supplied for burning high viscosity oil.
Simplified maintenance is achieved by the Riello designed 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 ≤ 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

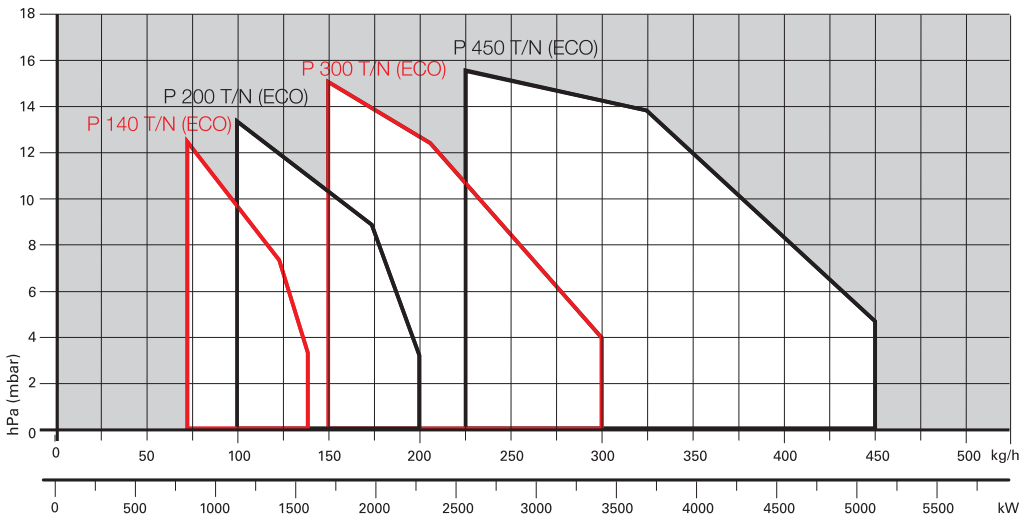
MODEL			P 140 T/N (ECO)	P 200 T/N (ECO)	P 300 T/N (ECO)	P 450 T/N (ECO)
Burner operation mode			Three stage			
Modulation ratio at max. output			2 ÷ 1			
Servomotor		type	LKS 210			LKS 300
		run time s	5			4
Heat output		kW	320/800 ÷ 1600	515/1140 ÷ 2280	626/1710 ÷ 3420	855/2560 ÷ 5130
		Mcal/h	275/688 ÷ 1376	443/980 ÷ 1961	538/1471 ÷ 2941	727/2202 ÷ 4412
		Kg/h	28/70 ÷ 140	45/100 ÷ 200	55/150 ÷ 300	75/224 ÷ 450
Working temperature		°C min./max.	0/40			
FUEL/AIR DATA						
Heavy oil	net calorific value	kWh/kg	11.4			
		kcal/kg	9800			
		MJ/kg	41			
Low viscosity version		mm^2/s (cSt)	50 @ 50°C			
Pump	type		Suntec E7	Suntec E7	Suntec TA2	Suntec TA3
	delivery	Kg/h	340 (at 25 bar)	340 (at 25 bar)	470 (at 25 bar)	750 (at 25 bar)
Medium viscosity version			200 @ 50°C (with heavy oil kit already installed in factory)			
High viscosity version (ECO models)		mm^2/s (cSt)	450 @ 50°C (separate 1400 rpm pump + heavy oil kit + pipes heating cable already installed installed in factory)			
Pump	type		Suntec TA2	Suntec TA3	Suntec TA4	Suntec TA5
	delivery	Kg/h	235 (at 25 bar)	385 (at 25 bar)	500 (at 25 bar)	670 (at 25 bar)
Atomised pressure		bar	25			
Fuel temperature		max. °C	60			
Fuel pre-heater			YES			
Fan		type	Centrifugal with forward tilted blades			
Air temperature		max. °C	60			
ELECTRICAL DATA						
Start up		type	Star - Delta			
Electrical supply		Ph/Hz/V	3N/50/400 ~ (± 10%) 3/50/230 ~ (± 10%)			
Auxiliary electrical supply		Ph/Hz/V	1/50/230 ~ (± 10%)			
Control box		type	RMO 88			
Total electrical power		kW	18.6	19.5	32	37
Auxiliary electrical power		kW	1.6	1.5	2.9	2.4
Heaters electrical power		kW	14	14	19.6	19.6
Protection level		IP	40			
Fan motor	electrical power	kW	3	4	7.5	15
	rated current	A	13.5/8	16.4/9.5	30/17.5	50.2/29
	start up current	A	86 - 51	83 - 48	195 - 113	301 - 174
	protection level	IP	55			
Pump motor	electrical power	kW	0.55	0.55	0.75	1.1
	rated current	A	3.1/1.8	3.1/1.8	3.7/2.1	4.7/2.7
Ignition transformer		type	--			
		V1 - V2	230 V - 2 x 6.5 Kv			
		I1 - I2	2 A - 35 mA			
Operation			Intermittent (at least one stop every 24h)			
EMISSIONS						
Noise levels	sound pressure	dB (A)	86.3	87	87.6	88.2
	sound power		97.3	98	98.6	99.2
Light oil	CO emission	mg/kWh	< 200			
	grade of smoke indicator	N° Bacharach	< 10			
	CxHy emission	mg/kWh	--			
	NOx emission	mg/kWh	< 620			

MODEL	P 140 T/N (ECO)	P 200 T/N (ECO)	P 300 T/N (ECO)	P 450 T/N (ECO)
APPROVAL				
Directive	2006/42/EC – 2014/30/UE – 2014/35/UE			
Conforming to	EN 267			
Certification	– –			

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 140-200-300-450 T/N (ECO)



Useful working field for choosing the burner

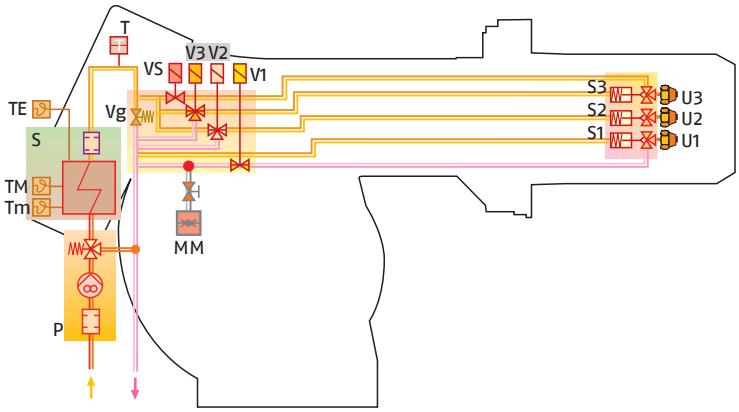
Test conditions conforming to EN267
Temperature: 20°C
Pressure: 1013.5 mbar
Altitude: 0 m a.s.l.

Fuel Supply

HYDRAULIC CIRCUIT

The burners are fitted with a valve group (a safety valve fitted in series with three oil delivery valves), an oil filter and an oil preheater unit along the oil line from the pump to the nozzle.
A thermostatic control device, on the basis of required heat, regulates oil delivery valves opening, allowing heavy oil passage through the valves to the nozzles.
Delivery valves open contemporary to the air damper, controlled by a servomotor.
The pumping group is fitted with a pump, an oil filter and a regulating valve, that adjusts atomised pressure. This value is pre-set at 25 bar in the factory, but it can be changed (28 bar for higher viscosity oils) by adjusting pressure regulator fitted on the pump.
The preheater unit is fitted with an electrical heater, a minimum and a maximum oil temperature switch and an oil temperature regulator.

Hydraulic circuit



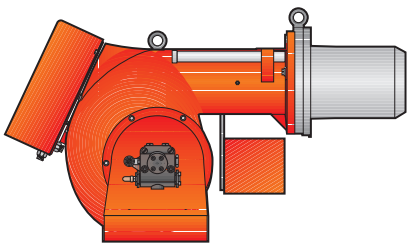
MM	Oil delivery gauge
P	Pump with oil filter
S	Oil preheater
S 1-2-3	Shutter
T	Thermometer
TE	Oil temperature regulator
Tm	Min. oil temperature switch
TM	Max. oil temperature switch
U 1-2-3	Nozzles
V 1-2-3	Delivery oil valves
VG	Oil pressure relief valve
VS	Safety valve

VISCOSITY

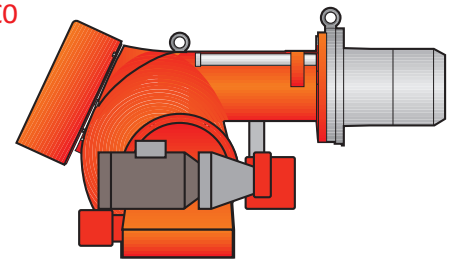
The 3 stage burner series can burn different heavy oil type from 50 up to 450 cSt @ 50°C (up to 60°E @ 50°C).
For different viscosity levels Riello recommends 3 different configurations:
1) Press T/N version for viscosity up to 50 cST (°E) @ (50°C: basic version with 2800 rmp oil pump installed directly on fan motor shaft
2) Press T/N version for viscosity up to 200 cST (25°E) @ 50°C: as basic version + heavy oil cartridges factory installed on nozzles, pump and valves group
3) Press T/N ECO version for viscosity up to 450 Cst (60°E) @ 50°C:

- with separate 1400 rpm low speed pump
- heavy oil cartridges factory installed on nozzles, pump and valves group
- pipes heating cable factory installed.

PRESS T/N



PRESS T/N ECO

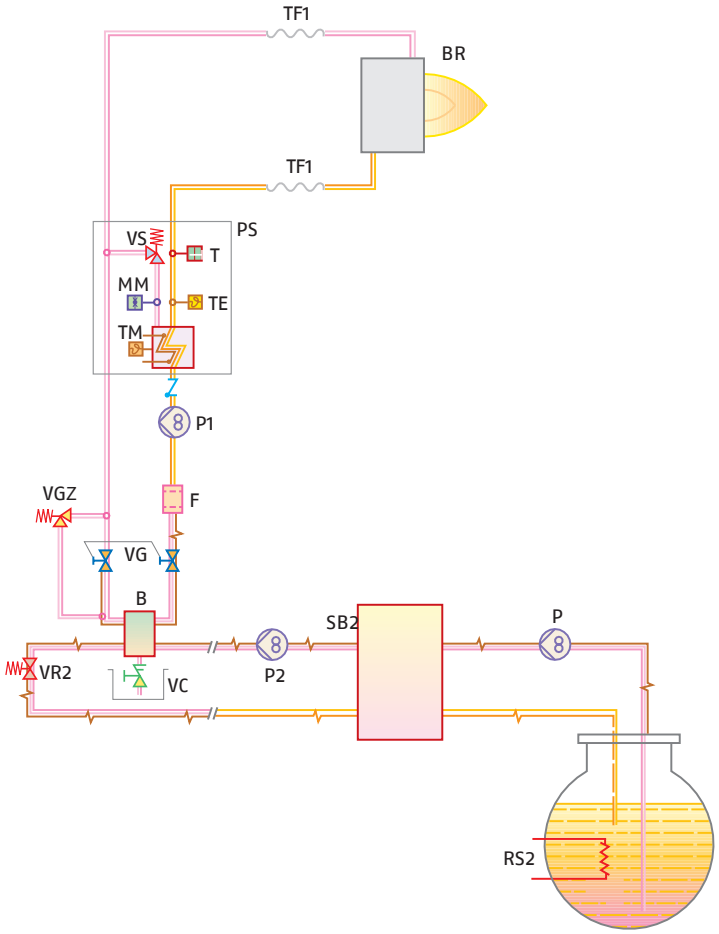


SELECTING THE FUEL SUPPLY LINES

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

IMPORTANT NOTES

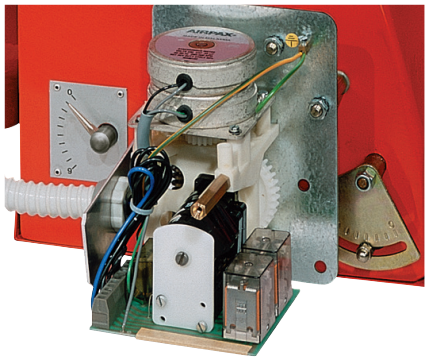
- The oil could easily flow through the pipes if those are properly sized, protected and heated (by electricity, steam or hot water).
- For starting-up: after excluding the burner by the shutter valves, let the oil flow into the supply ring up to reach the required circulation; after that open the valves and supply normally the burner.
- 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 burner output.



B	Gas separator bottle
BR	Burner
F	Oil filter
MM	Oil delivery gauge
P	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
T	Thermometer
TE	Temperature switch regulation
TF1	Flexible oil line
TM	Max oil temperature switch
VC	Vent valve
VGZ	Safety valve – burner circuit
VR2	Oil valve – main ring
VS	Preheater safety valve

Ventilation

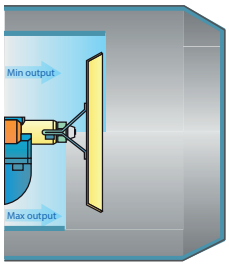
The ventilation circuit is provided with a forward blades centrifugal fan, which guarantees high pressure levels at the required air deliveries and permits installation flexibility.
Inspite of the remarkable output power and of the very high pressure performances, structures of PRESS T/N models are extremely compact.
The use of sound proofing boxes helps in reducing the noise level.
A variable profile cam connects fuel and air setting, ensuring fuel efficiency in all firing rates.



Servomotor

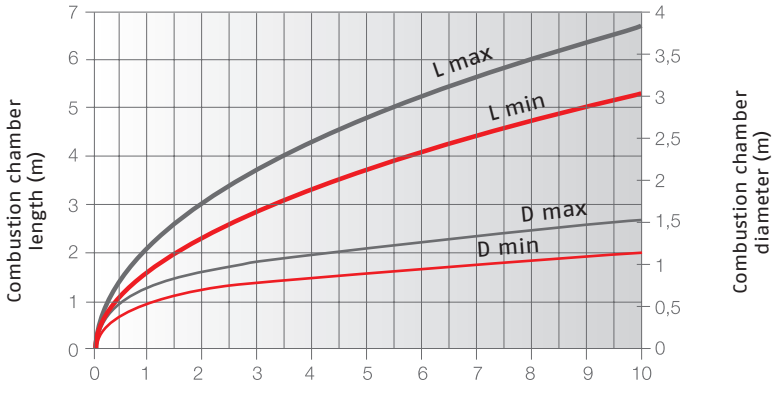
Combustion Head

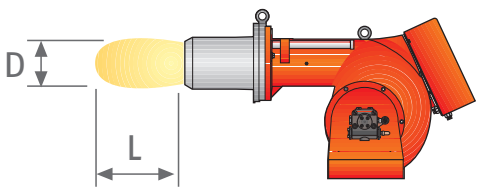
Two different lenghts of the combustion head can be chosen for the various models of the PRESS T/N series of burners.
The choice depends on the thickness of the front panel and the type of the boiler.
Depending on the type of heat generator, it is necessary to check the correct head penetration into 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 for a 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 = 3500 kW;

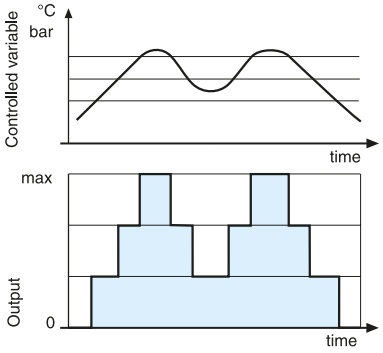
L Combustion Chamber (m) = 3.5 m (medium value);
D Combustion Chamber (m) = 1 m (medium value)

Operation

BURNER OPERATION MODE

With three stage operation, the PRESS T/N burners can follow the temperature load requested by the system. A ratio between maximum and minimum working output of 3:1 is reached, thank to the servomotor: the air delivery is proportional to required output. On three stage operation, the burner gradually adjusts output to the requested level, by varying between the three pre-set levels.

"THREE STAGE" OPERRATION



MODEL	STAGE	MAX OUTPUT (kW)	MAX DELIVERY (Kg/h)
P 140 T/N (ECO)	1st	536	47
	2nd	1060	93
	3rd	1595	140
P 200 T/N (ECO)	1st	763	67
	2nd	1516	133
	3rd	2279	200
P 300 T/N (ECO)	1st	1140	100
	2nd	2280	200
	3rd	3420	300
P 450 T/N (ECO)	1st	1710	150
	2nd	3420	300
	3rd	5130	450

All PRESS T/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.

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

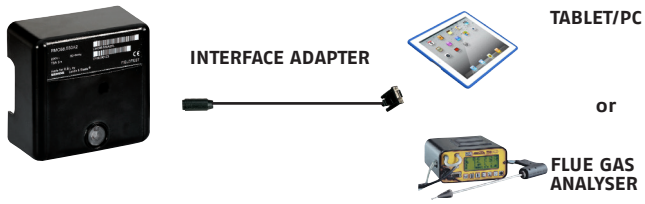
Both elements are located under the transparent cover of lock-out reset button, as showed below.

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	🟡 🟡 🟡 🟡 🟡 🟡 🟡 🟡
Ignition phase	🟡 ○ 🟡 ○ 🟡 ○ 🟡 ○
Flame OK	🟢 🟢 🟢 🟢 🟢 🟢 🟢 🟢
Poor flame	🟢 ○ 🟢 ○ 🟢 ○ 🟢 ○
Undervoltage, built-in fuse	🟡 🔴 🟡 🔴 🟡 🔴 🟡 🔴
Fault, alarm	🔴 🔴 🔴 🔴 🔴 🔴 🔴 🔴
Extraneous light	🔴 🟢 🔴 🟢 🔴 🟢 🔴 🟢

○ 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)

(○ LED off)

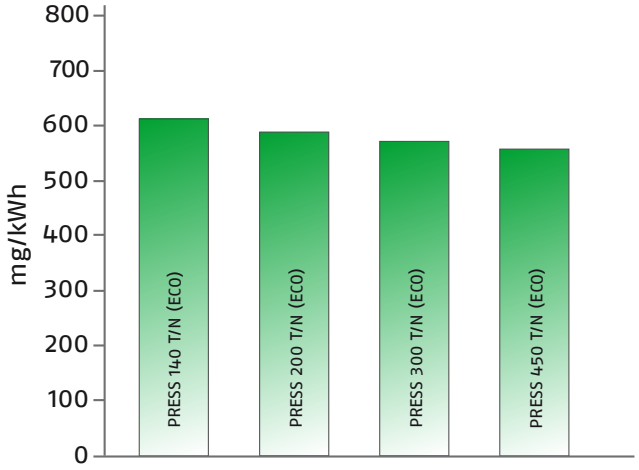
ERROR CODE TABLE

POSSIBLE CAUSE OF FAULT		FLASH CODE
No establishment of flame at the end of safety time:	- faulty photocell - faulty or soiled oil valves - poor adjustment of burner - faulty ignition transformer	🔴 2x flashes
Not used		🔴 3x flashes
Light in the chamber before firing		🔴 4x flashes
Loss of flame during operation:	- faulty or soiled oil valves - poor adjustment of burner	🔴 7x flashes
Faulty thermostat for oil permissive signal Heating resistances blown		🔴 8x flashes
Wiring error internal fault		🔴 10x flashes

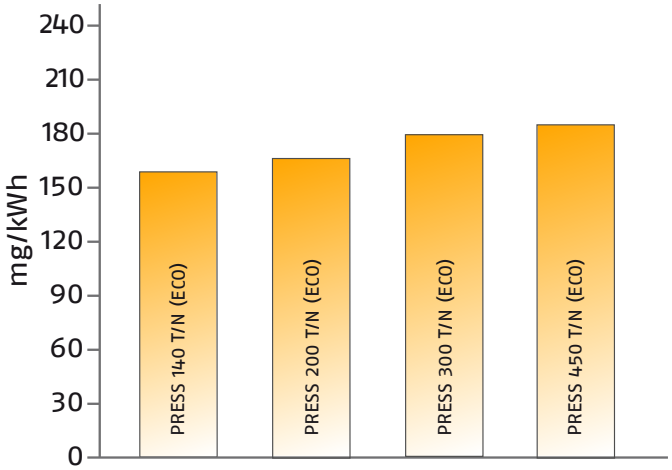
Emissions

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

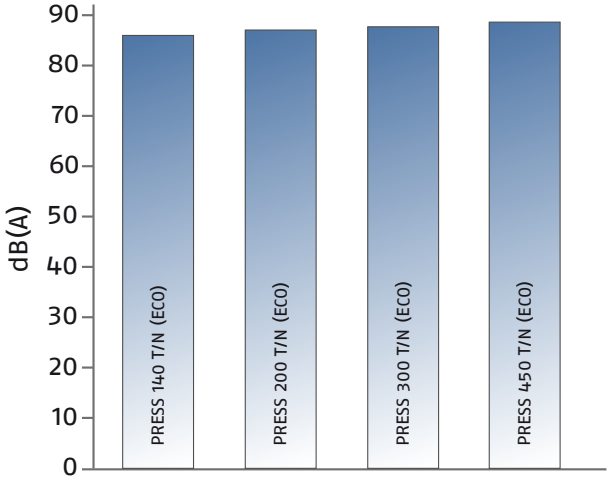
NO_2 EMISSIONS



CO EMISSIONS



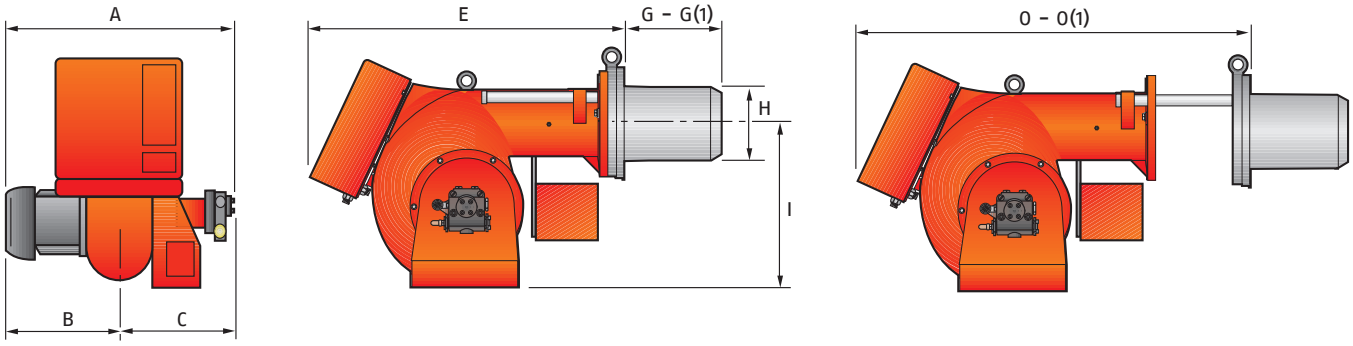
NOISE EMISSIONS



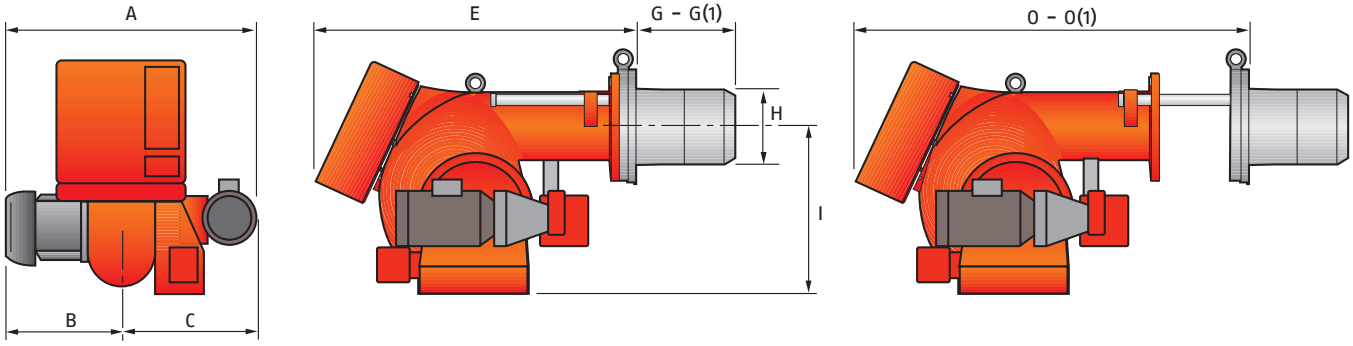
Overall Dimensions (mm)

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.

PRESS T/N



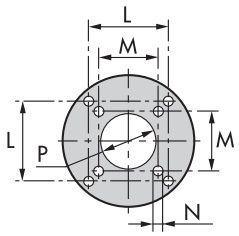
PRESS T/N ECO



MODEL	A	B	C	E	F - F (1)	H	I	O - O (1)
P 140 T/N	796	396	400	890	323 - 433	222	467	1370 - 1370
P 200 T/N	796	396	400	890	352 - 462	250	467	1370 - 1370
P 300 T/N	858	447	411	1000	376 - 506	295	496	1515 - 1665
P 450 T/N	950	508	442	1090	435 - 565	336	525	1665 - 1820
P 140 T/N ECO	900	396	504	890	323 - 433	222	467	1370 - 1370
P 200 T/N ECO	900	396	504	890	352 - 462	250	467	1370 - 1370
P 300 T/N ECO	984	447	537	1000	376 - 506	295	496	1515 - 1665
P 450 T/N ECO	1100	508	592	1090	435 - 565	336	525	1665 - 1820

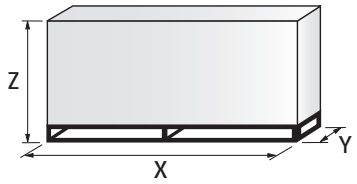
(1) Length with extended combustion head

BURNER – BOILER MOUNTING FLANGE



MODEL	L	M	N	P
P 140 T/N (ECO)	260	230	M 14	225
P 200 T/N (ECO)	260	-	M 16	255
P 300 T/N (ECO)	260	-	M 18	300
P 450 T/N (ECO)	310	-	M 20	350

PACKAGING



MODEL	X	Y	Z	kg
P 140 T/N (ECO)	1740	990	950	180
P 200 T/N (ECO)	1740	990	950	190
P 300 T/N (ECO)	2040	1180	1125	260
P 450 T/N (ECO)	2040	1180	1125	350

Installation Description

Skilled and qualified personnel must perform installation, start up and maintenance.
All operations must be carried in accordance with the technical handbook supplied with the burner.

BURNER SETTING

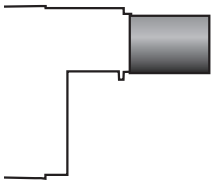
- All the burners have slide bars, for easier installation and maintenance.
- After drilling the boilerplate, using the supplied gasket as a template, dismantle the blast tube from the burner and fix it to the boiler.
- Adjust the combustion head.
- Refit the burner casing to the slide bars.
- Install the nozzle, 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 (after checking rotation direction if it is a three phase motor).
- On start up, check:
  - pressure pump and valve unit regulator (to max. and min.);
  - combustion quality, in terms of unburned substances and excess air.

Burner accessories

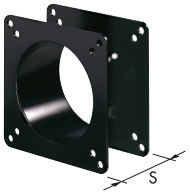
EXTENDED HEAD KIT



"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
P 200 T/N	352	462	20047317

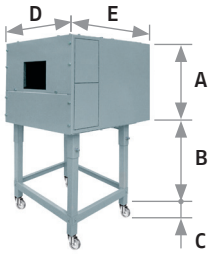
SPACER KIT



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
P 140 T/N – P 200 T/N	102	3000722
P 300 T/N	110	3000723
P 450 T/N	130	3000751

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	C (mm)	D (mm)	E (mm)	[dB(A)] (*)	CODE
P 140 – 200 T/N	C4/5	850	160-980	110	980	930	10	3010404
P 300 – 450 T/N P 140 – 200 T/N ECO P 300 – 450 T/N ECO	C7	1255	160-980	110	1140	1345	10	3010376

(*) 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 60°E viscosity at 50°C.

FILTER TYPE	FILTERING DEGREE (µm)	CODE
ø = 1" 1/2 (60°E – at 50°C)	300	3010022

HEATER / THERMOSTAT TYPE	CODE
Thermostatic heater with LED	3010060
Heater	3010061
Thermostat (two-stage / regulable)	3010062

GAS SEPARATOR BOTTLE

Gas separator bottle connects the burner oil circuit to the main ring circuit. It allows to recover heat in excess and discharge return circuit gas.

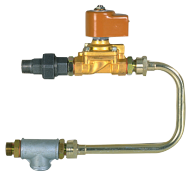
BURNER	CODE
P 140 - 200 T/N	3000748
P 300 - 450 T/N	3010012

HEAVY OIL KIT

Equipped with electrical heaters, it permits the employment of PRESS T/N burners with fuel oil of max. viscosity at 50°C: 20°E (150 mm^2/s, cSt), Type BUNKER B / USA n° 5.

BURNER	CODE
P 140 - 200 - 300 - 450 T/N	3000721

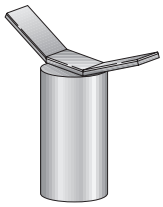
HEAVY OIL PRECIRCULATION KIT



This kit, used with oil with high viscosity, in maintains fuel circulation in the oil circuit for avoiding system stop at start up.

BURNER	CODE
P 140 - 200 T/N	3000749
P 300 - 450 T/N	3000750

BURNER SUPPORT



For easier maintenance, a mobile burner support has been designed, which means the burner can be dismantled without the need of forklift trucks.

BURNER	CODE
P 300 - 450 T/N	3000731

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 140 – 200 – 300 – 450 T/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

Available for T/N and T/N ECO versions

NOZZLE

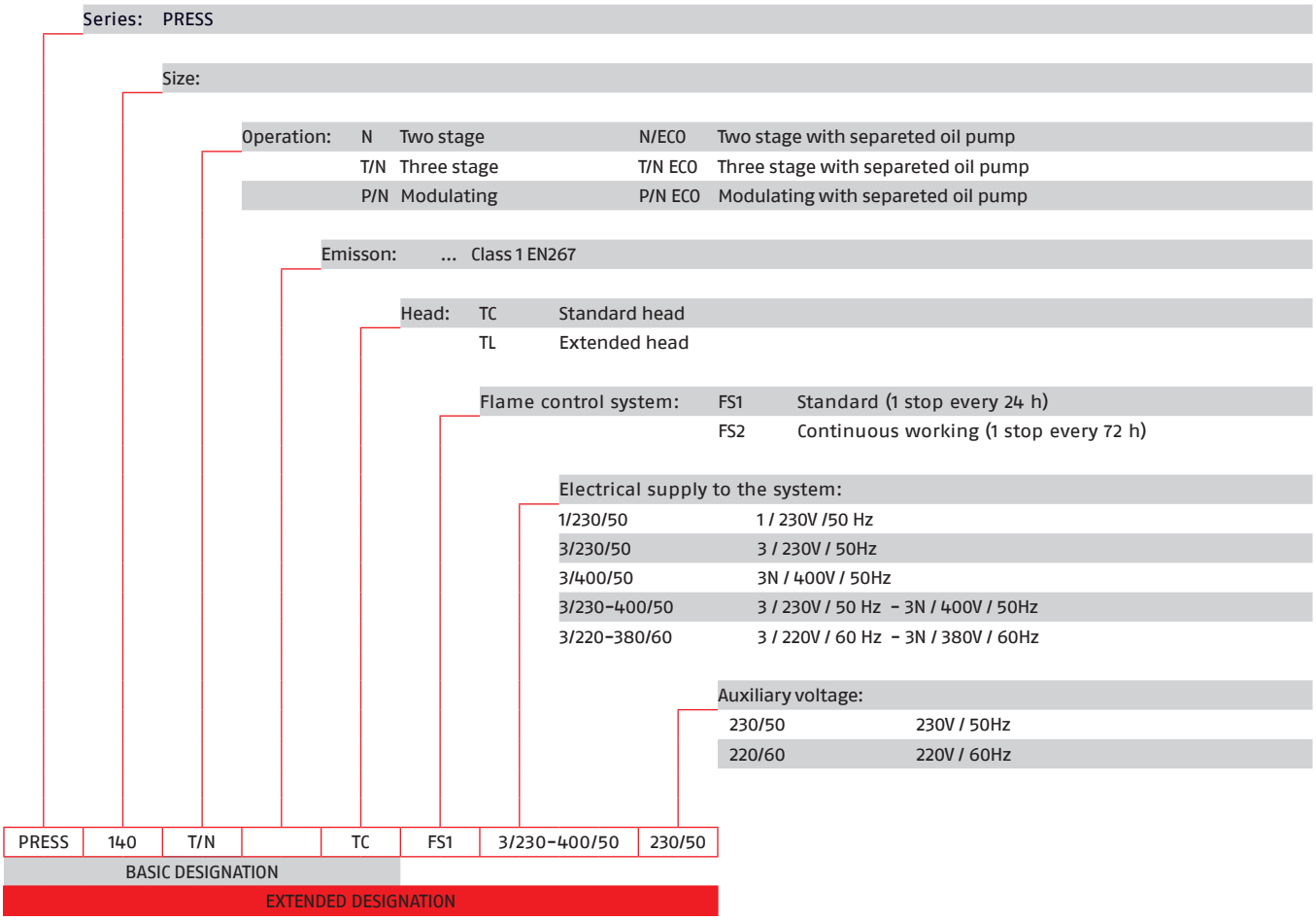
The nozzles must be ordered separately. The following table shows the features and codes on the basis of the maximum required output.
NOTE: each burner needs N° 3 nozzle.

BURNER	RATED DELIVERY (kg/h) at 25 bar	GPL	NOZZLES CODE
P 140 T/N	20.8	3.5	3043162
P 140 T/N	23.8	4	3043172
P 140 T/N	26.8	4.5	3043182
P 140 T/N - P 200 T/N	29.8	5	3043192
P 140 T/N - P 200 T/N	32.7	5.5	3043202
P 140 T/N - P 200 T/N	35.7	6	3043212
P 140 T/N - P 200 T/N	38.7	6.5	3043222
P 140 T/N - P 200 T/N	41.7	7	3043232
P 140 T/N - P 200 T/N	44.6	7.5	3043242
P 200 T/N - P 300 T/N	50.6	8.5	3043262
P 200 T/N - P 300 T/N	56.5	9.5	3043272
P 200 T/N - P 300 T/N - P 450 T/N	62.5	10.5	3043302
P 300 T/N - P 450 T/N	71.4	12	3043322
P 300 T/N - P 450 T/N	80.4	13.5	3043342
P 300 T/N - P 450 T/N	92.3	15.5	3043372
P 450 T/N	104.2	17.5	3043402
P 450 T/N	116.1	19.5	3043432
P 450 T/N	128	21.5	3043452
P 450 T/N	142.8	24	3043472

Specification

DESIGNATION OF SERIES

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



AVAILABLE BURNER MODELS

BURNER MODELS				MODEL	HEAT OUTPUT		TOTAL ELECTRICAL POWER	CERTIFICATION	NOTE
					(KW)	(Kg/h)	(KW)		
P 140 T/N	TC	FS1	3/230-400/50	230/50	320-1600	28-140	19	-	(3)
P 140 T/N	TL	FS1	3/230-400/50	230/50	320-1600	28-140	19	-	
P 140 T/N	TC	FS1	3/220-380/60	220/60	320-1600	28-140	19	-	
P 140 T/N	TL	FS1	3/220-380/60	220/60	320-1600	28-140	19	-	
P 200 T/N	TC	FS1	3/230-400/50	230/50	515-2280	45-200	20	-	
P 200 T/N	TL	FS1	3/230-400/50	230/50	515-2280	45-200	20	-	
P 200 T/N	TC	FS1	3/220-380/60	220/60	515-2280	45-200	20	-	
P 200 T/N	TL	FS1	3/220-380/60	220/60	515-2280	45-200	20	-	
P 300 T/N	TC	FS1	3/230-400/50	230/50	626-3420	60-300	30	-	(3)
P 300 T/N	TL	FS1	3/230-400/50	230/50	626-3420	60-300	30	-	
P 300 T/N	TC	FS1	3/230/50	230/50	626-3420	60-300	30	-	(1)
P 300 T/N	TL	FS1	3/230/50	230/50	626-3420	60-300	30	-	(1)
P 300 T/N	TC	FS1	3/400/50	230/50	626-3420	60-300	30	-	(1)
P 300 T/N	TL	FS1	3/400/50	230/50	626-3420	60-300	30	-	(1)
P 300 T/N	TC	FS1	3/220-380/60	220/60	626-3420	60-300	30	-	(1)
P 450 T/N	TC	FS1	3/230/50	230/50	855-5130	75-450	34	-	(2)
P 450 T/N	TL	FS1	3/230/50	230/50	855-5130	75-450	34	-	(2)
P 450 T/N	TC	FS1	3/400/50	230/50	855-5130	75-450	34	-	(2)
P 450 T/N	TL	FS1	3/400/50	230/50	855-5130	75-450	34	-	(2)

(1) Star-delta starting, on board
(2) Star-delta starting, as standard equipment
(3) Nozzle supplied with the burner
Net calorifi c value: 11.16 kWh/kg; 9600 kcal/kg
Max Viscosity at 50°C for PRESS T/N: 7°E (50 mm^2/s, cSt), Type MEDIUM HEAVY OIL / USA n° 4.
Max Viscosity at 50°C for PRESS T/N ECO: 20°E (150 mm^2/s, cSt), Type BUNKER B / USA n° 5.
For higher viscosity please contact Riello Burners Technical Department.
The burners of PRESS series are in according to 2014/30/UE - 2014/35/UE - 2006/42 EC Directive and EN 267 Norm.

For ECO models ask for specific code.

Special configuration on demand:
- Installed pipes heating cable on PRESS T/N - T/N ECO models, Max Viscosity at 50°C: 60°E (450 mm^2/s, cSt), Type BUNKER C / USA no. 6.
- Steam oil pre-heater on T/N ECO models.

STATE OF SUPPLY

Monoblock forced draught heavy oil burner, three stage operation, made up of:
- Air suction circuit
- Fan with forward curved blades
- Air dampers for air setting controlled by a servomotor
- Fan 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 oil safety shut-off valve fitted in series with three valves controlling three-stage on the output circuit
- Heavy oil heating cartridges (T/N ECO version)
- Oil pump motor at 1400 rpm (T/N ECO version)
- Oil preheater
- Servomotor for air damper regulation
- Photocell for flame detection
- Burner safety control box
- Flame inspection window
- Slide bars for easier installation and maintenance
- Protection filter against radio interference
- IP X0D (IP 40) electric protection level.

Standard equipment:
- 2 flexible hoses for pipe connection
- 2 nipples for flexible hoses
- 1 thermal insulation screen
- 4 screws for fixing the burner flange to the boiler
- 3 nozzles
- 2 extensions for bars (for long head version of P 300 T/N and P 450 T/N)
- 5 wiring looms for electrical connections (7 for P 450 T/N version)
- 1 star delta starter (only for P 450 T/N 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
- Gas separator bottle
- Heavy oil kit
- Heavy oil precirculation kit
- Burner support
- PC Interface kit
- Protection kit (electromagnetic interferences)
- Nozzle

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

07/2016
TS0044UK03

[1]

[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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