

## PRESS T/N - T/N ECO SERIES

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 requirements.

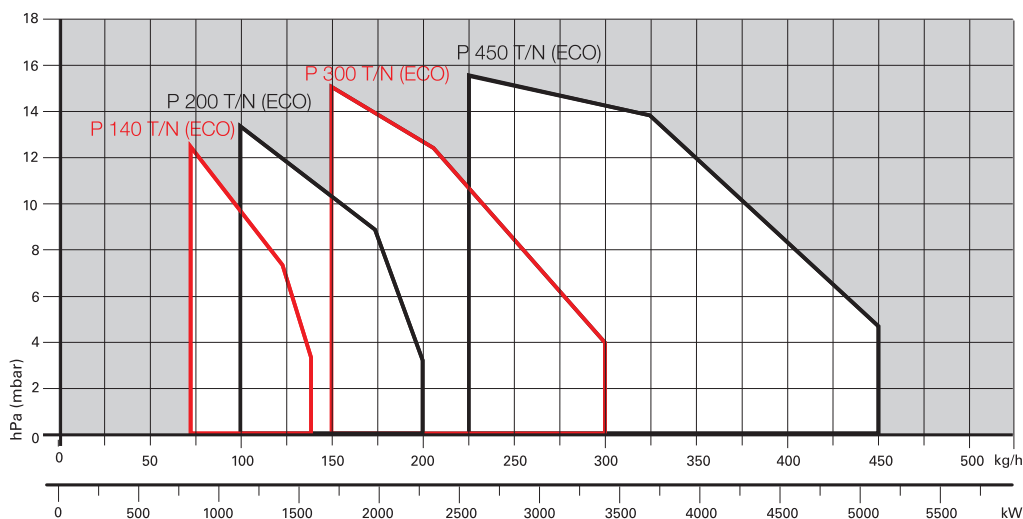
A servomotor adjusts automatically air damper to the opening value, determined to obtain always the necessary fuel consumption. Every model of PRESS T/N series is available in two different combustion head length (short or long head) to be selected on the basis of specific application requirements. An electric preheater has been fitted to maintain the oil at the correct atomising temperature at maximum output 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.



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

### FIRING RATES



Useful working field for choosing the burner

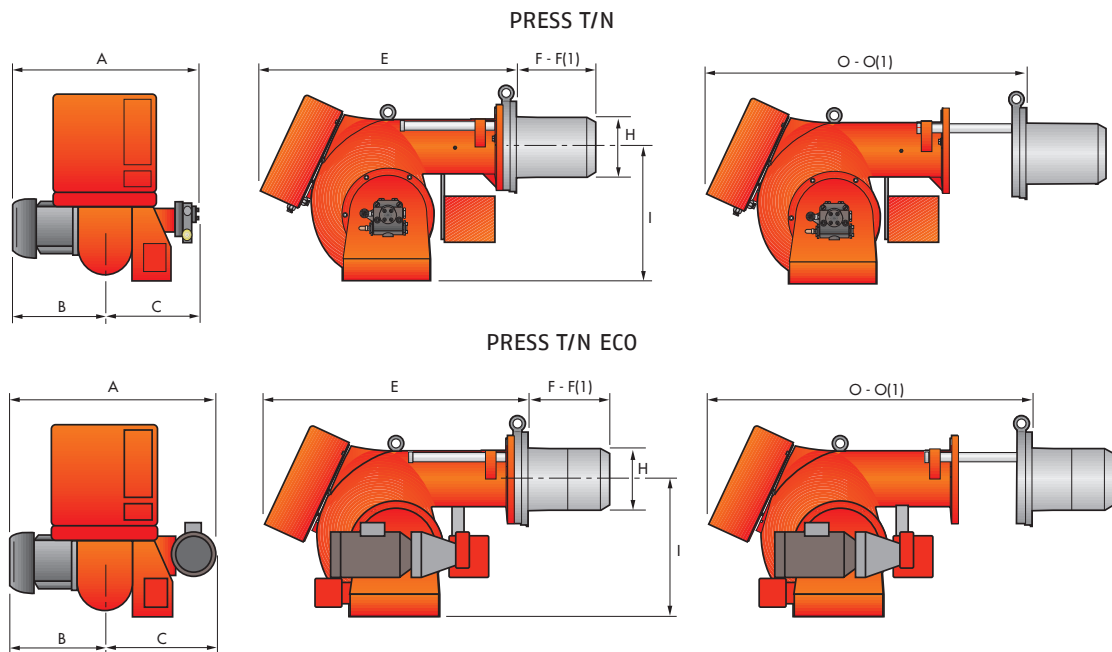
Test conditions conforming to EN267  
 Temperature: 20°C  
 Pressure: 1013,5 mbar  
 Altitude: 0 m a.s.l.

# Three Stage Heavy Oil Burners

## PRESS T/N - T/N ECO SERIES

### Overall dimensions (mm)

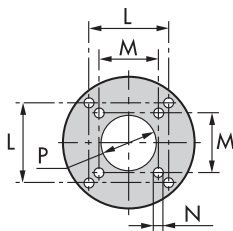
#### BURNER



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

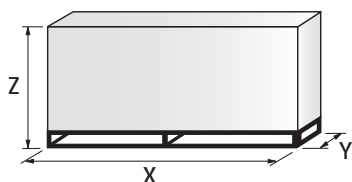
(1) Length with extended combustion head

#### 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

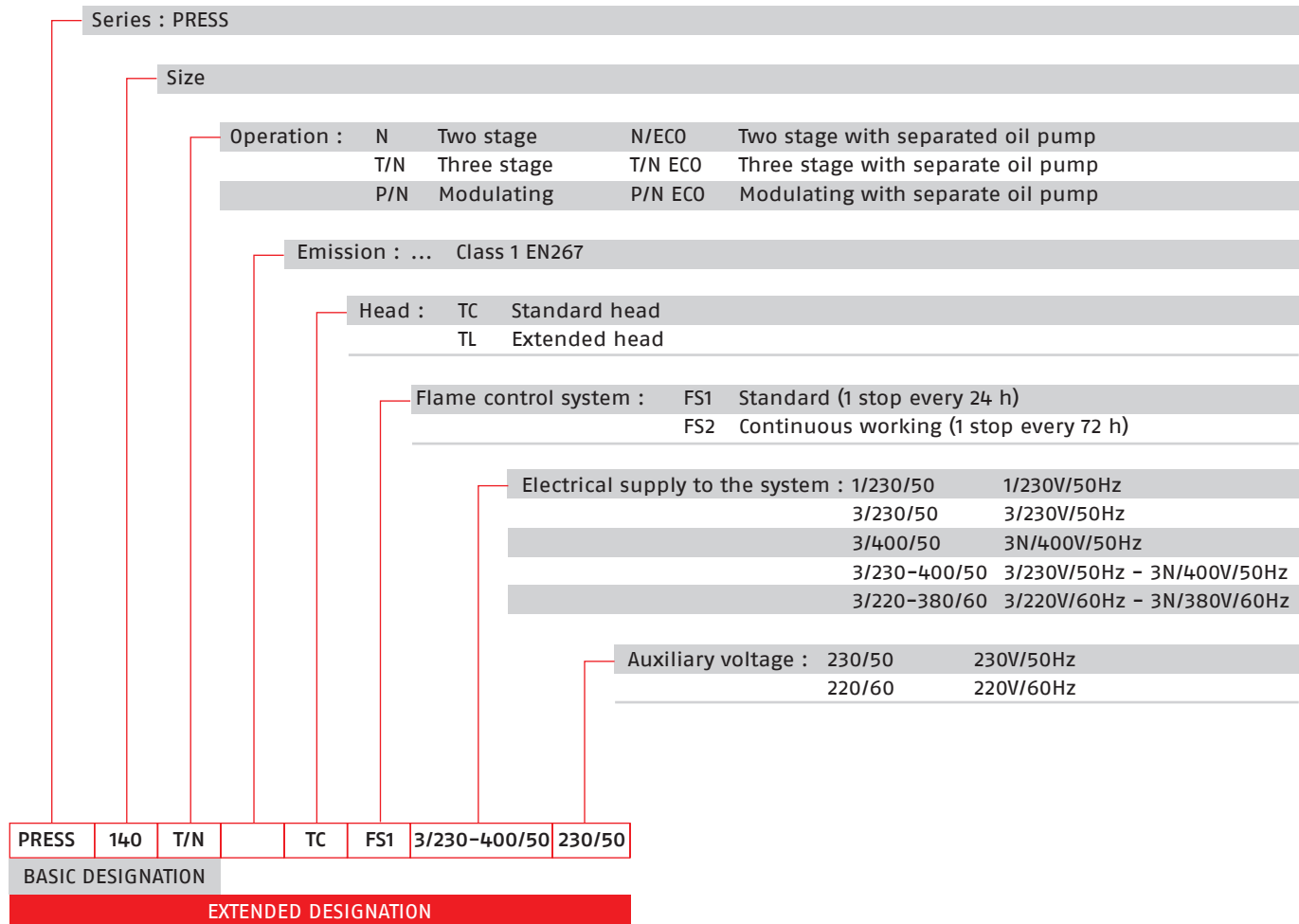
# Three Stage Heavy Oil Burners

## PRESS T/N - T/N ECO SERIES

**RIELLO**

# Specification

## DESIGNATION OF SERIES



HEAVY OIL

# Three Stage Heavy Oil Burners

## PRESS T/N - T/N ECO SERIES

### Specification

#### 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 vacuumeter
  - 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.

# Three Stage Heavy Oil Burners

## PRESS T/N - T/N ECO SERIES

**RIELLO**

### Available models

CODE	MODEL						HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
							(kW)	(kg/h)			
3436833	PRESS 140 T/N	TC	FS1	3/230-400/50	230/50	320-1600	28-140	19	-	(3)	
3436834	PRESS 140 T/N	TL	FS1	3/230-400/50	230/50	320-1600	28-140	19	-		
3436885	PRESS 140 T/N	TC	FS1	3/220-380/60	220/60	320-1600	28-140	19	-		
3436886	PRESS 140 T/N	TL	FS1	3/220-380/60	220/60	320-1600	28-140	19	-		
3437733	PRESS 200 T/N	TC	FS1	3/230-400/50	230/50	515-2280	45-200	20	-		
3437734	PRESS 200 T/N	TL	FS1	3/230-400/50	230/50	515-2280	45-200	20	-		
3437785	PRESS 200 T/N	TC	FS1	3/220-380/60	220/60	515-2280	45-200	20	-		
3437786	PRESS 200 T/N	TL	FS1	3/220-380/60	220/60	515-2280	45-200	20	-		
3438964	PRESS 300 T/N	TC	FS1	3/230-400/50	230/50	626-3420	60-300	30	-	(3)	
3438965	PRESS 300 T/N	TL	FS1	3/230-400/50	230/50	626-3420	60-300	30	-		
3438966	PRESS 300 T/N	TC	FS1	3/230/50	230/50	626-3420	60-300	30	-	(1)	
3438967	PRESS 300 T/N	TL	FS1	3/230/50	230/50	626-3420	60-300	30	-	(1)	
3438968	PRESS 300 T/N	TC	FS1	3/400/50	230/50	626-3420	60-300	30	-	(1)	
3438969	PRESS 300 T/N	TL	FS1	3/400/50	230/50	626-3420	60-300	30	-	(1)	
3808511	PRESS 300 T/N	TC	FS1	3/220-380/60	220/60	626-3420	60-300	30	-	(1)	
3439345	PRESS 450 T/N	TC	FS1	3/230/50	230/50	855-5130	75-450	34	-	(2)	
3439346	PRESS 450 T/N	TL	FS1	3/230/50	230/50	855-5130	75-450	34	-	(2)	
3439347	PRESS 450 T/N	TC	FS1	3/400/50	230/50	855-5130	75-450	34	-	(2)	
3439348	PRESS 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 calorific value: 11,16 kWh/kg; 9600 kcal/kg

Max Viscosity at 50°C for PRESS T/N: 7°E (50 mm<sup>2</sup>/s, cSt), Type MEDIUM HEAVY OIL / USA n° 4.

Max Viscosity at 50°C for PRESS T/N ECO: 20°E (150 mm<sup>2</sup>/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 2004/108 - 2006/95 - 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<sup>2</sup>/s, cSt), Type BUNKER C / USA no. 6.
- Steam oil pre-heater on T/N ECO models.

# Three Stage Heavy Oil Burners

## PRESS T/N - T/N ECO SERIES

### Burner accessories

Available for T/N and T/N ECO versions

#### Nozzle type F80 PL 60°

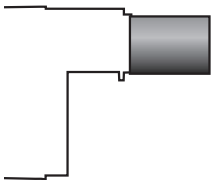


The nozzles must be ordered separately. The following table shows the features and codes on the basis of the maximum required output.

NOTE: each burner needs N° 3 nozzles.

BURNER	RATED DELIVERY (kg/h) at 25 bar	GPH	NOZZLE 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

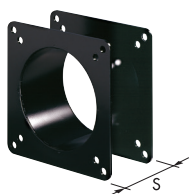
#### Extended head kit



"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)	KIT CODE
▶ PRESS 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)	KIT CODE
▶ P 140 T/N - P 200 T/N	102	3000722
▶ P 300 T/N	110	3000723
▶ P 450 T/N	130	3000751

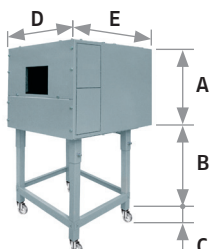
# Three Stage Heavy Oil Burners

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## Burner accessories

### 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)] (*)	BOX CODE
▶ P 140 - 200 T/N P 300 - 450 T/N	C4/5	850	160 - 980	110	980	930	10	3010404
▶ 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)	FILTER CODE
▶ Ø = 1"1/2 (60°E at 50°C)	300	3010022

HEATER / THERMOSTAT TYPE	HEATER / THERMOSTAT 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 T/N - P 200 T/N	3000748
▶ P 300 T/N - P 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<sup>2</sup>/s, cSt), Type BUNKER B / USA n° 5.

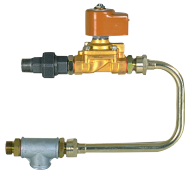
BURNER	KIT CODE
▶ P 140 T/N - P 200 T/N - P 300 T/N - P 450 T/N	3000721

# Three Stage Heavy Oil Burners

## PRESS T/N - T/N ECO SERIES

### Burner accessories

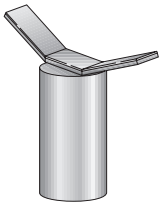
#### Heavy oil precirculation kit



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

BURNER	KIT CODE
► P 140 T/N - P 200 T/N	3000749
► P 300 T/N - P 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	SUPPORT CODE
► P 300 T/N - P 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	KIT CODE
► P 140 T/N - P 200 T/N - P 300 T/N - P 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	KIT CODE
► All models	3010386