

PRE-ASSEMBLED BURNERS

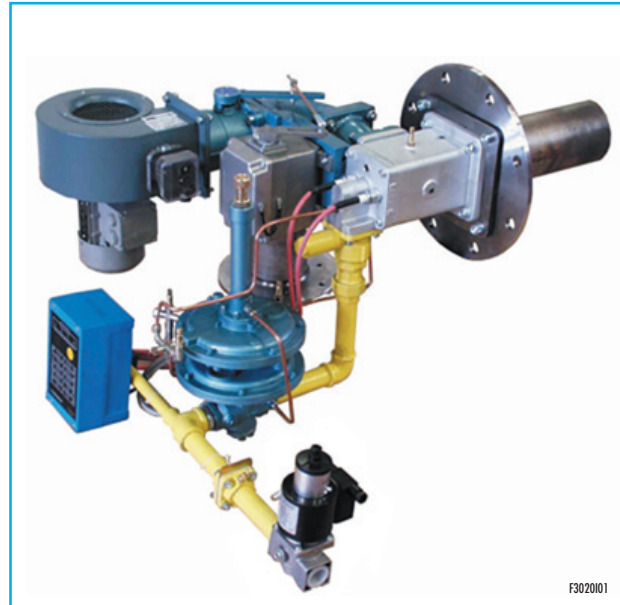
EP-500-800 SERIES

FEATURES

- Mixer body cast iron G25
- Gas inlet block cast iron G25
- Flame tube AISI304
- Combustion head AISI310
- Mounting flange iron
- Max. pressure in combustion chamber 800°C
- Max. pressure in combustion chamber $-0.2 \leq 0 \leq +0.2$ mbar
(for different values, please consult our technical office)
- Capacities available 145kW 230 kW
- Min. gas pressure at burner 25 mbar
- Max. gas pressure at burner 140 mbar
- Adequate to different types of gases CH₄ /L.P./propane/etc.
- Excellent flame stability excess air, excess gas stoichiometric combustion
- Low NO_x, CO and aldehyde levels
- Wide turndown range
- Easily replaced electrodes
- Separated air and gas inlets, mixing at nozzle, no flashback
- Light, small, compact burners equipped with centrifugal blower, modulating butterfly valve, micrometric gas flow adjuster, gas pressure adjuster, spark ignition electrode and detection electrode, peepsight, calibrated orifice plate flow meters and pressure plugs to measure gas flows

Features of the electric control MOD.ECON-O:

- Voltage 24/115/230V+10%-15% 50/60Hz
- Proportional control signal on request 0÷10V, 4÷20mA (only for ECON-O 24V)
- Power consumption 4 VA
- No. 2 auxiliary micro-switches 5A/250 Vac
- Protection standard IP54
- Connections no. 2 cable entries PG 13.5
- Angle of rotation 90°
- 90° rotation time 60 s
- Max. operating temperature -10 to +60°C
- Nominal torque 20 Nm
- Housing die cast aluminium
- Projection of shaft 9.5 mm
- Potentiometers available 150 Ω, 1.000 Ω, 2.500 Ω (standard no. 1 1.000 Ω)
- Weight 2.5 Kg



- Mounting position optional
- Operation Auto-man

Features of blowers (in standard conditions):

- Voltage 400V + 10%-15% 50Hz
For other values or frequency altitudes, please consult the constructor
- EP-500 - Model MN502 0.55 kW two poles 76 db
- EP-800 - Model MAP280 0.55 kW two poles 70 db

APPLICATION RANGE

- Hot air generator burners.
- Steam generator burners.
- Incinerators.
- Driers.
- Heat-treating furnaces for rubber, material, resin, carpets, paint, solvent, etc.
- Textile machines and machines for dye-houses (Rameause).
- Low-temperature processes.
- Foodstuff ovens, pharmaceutical ovens and whenever low-emission burners are required.



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DESCRIPTION

The metallic burners of the EP series are nozzle-mix burners and are usually used in processes with temperatures up to 800 °C. The comburent air is supplied by an air blower mounted onto a structure which is one thing with the burner; an adequately connected electrically controlled butterfly valve and a zerogovernor, allow the air/gas

flow regulation. Gas and air are mixed only at the nozzle to prevent dangerous flashback. The solidity, the fact that it is completely made of metal yet it is light and small guarantee an easy and safe installation.

INSTALLATION

The metallic burners EP are supplied with an iron, mounting flange. Avoid mounting with flame up which may cause condensation resulting in ignition and detection problems. The furnace refractory should be set to leave some room on all sides of the block. This space should be packed with refractory material, for example ceramic

fiber, to allow for expansion of the walls (see specific technical note). The metallic burners EP are particularly suitable for plants with combustion chamber where pressure ranges between -20 and 2mm H2O. Should the burner be mounted in chambers with different pressure, please contact the constructor.

IGNITION AND FLAME DETECTION

Burner ignition is mainly achieved by an EN or WAND direct spark ignition electrode; a pilot burner (P42PBST/X) may be supplied on request. Flame detection is done by an EN or WAND electrode and,

on request, a UV-2 ultraviolet scanner may be used. Flame detection systems are required on all burners operating at furnace temperatures below 750° C.

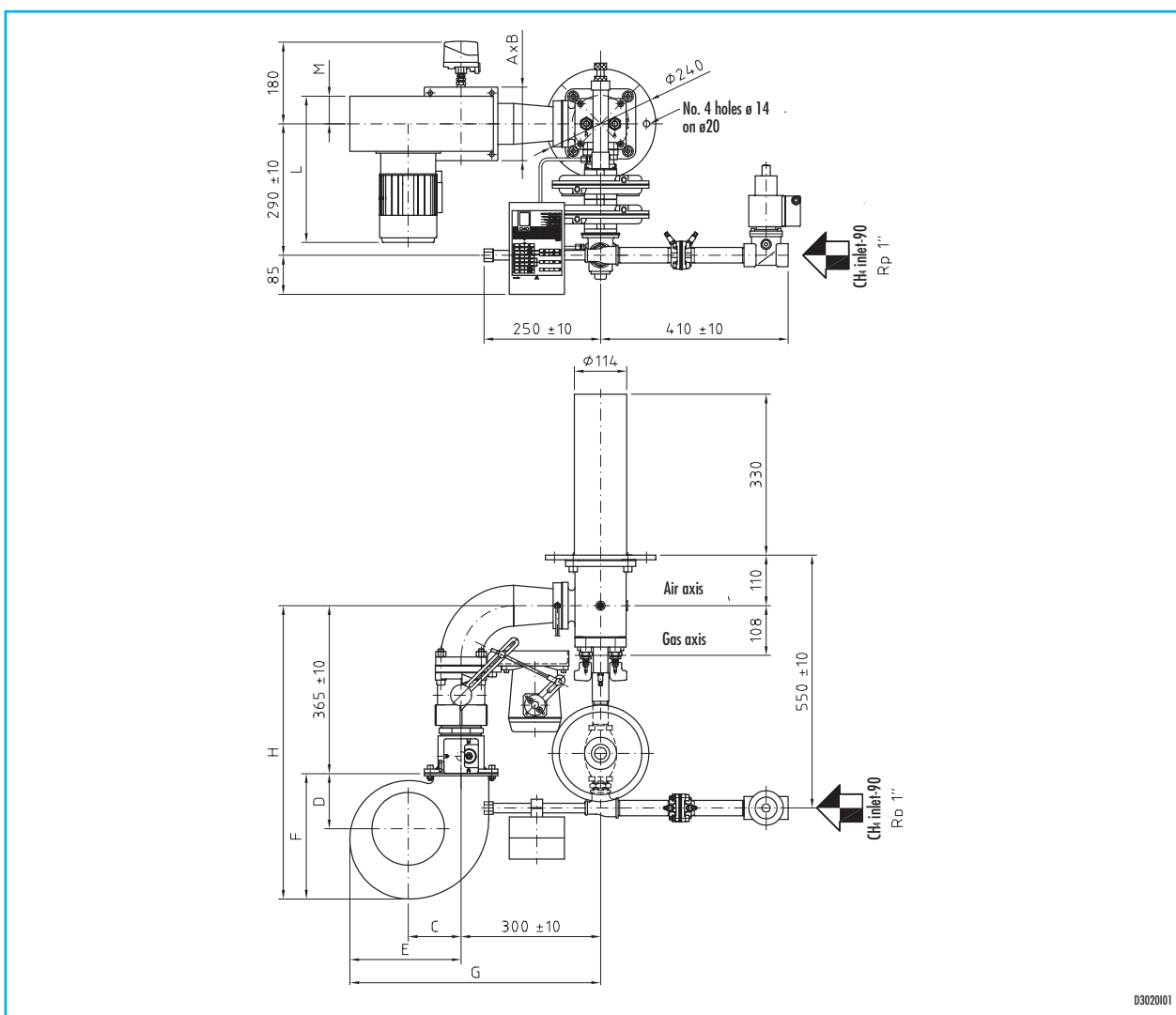
Model	Ignition with electrode		Ignition with pilot	
	Igniter	Detector	Igniter	Detector
EP - 500	3EN / IS-4	3EN / IS-4	P42PBST-W/X	3EN / IS-4
EP - 800	3EN / IS-4	3EN / IS-4	P42PBST-W/X	3EN / IS-4

CAPACITY TABLE

Model	Flame length mm	Gas pressure (min/max) mbar	Capacity kW @ 30 °C	Capacity kW @ 30 °C 30% excess air	Turndown (direct ignition)
EP-500	700÷800	25/140	145	100	10:1
EP-800	800÷900	25/140	230	160	14:1

Flame lengths are approximate and refer to a natural gas-fired burner, in free air, operating with stoichiometric ratio and at nominal capacity. The values in the table refer to combustion chambers with zero pressure.

OVERALL DIMENSIONS

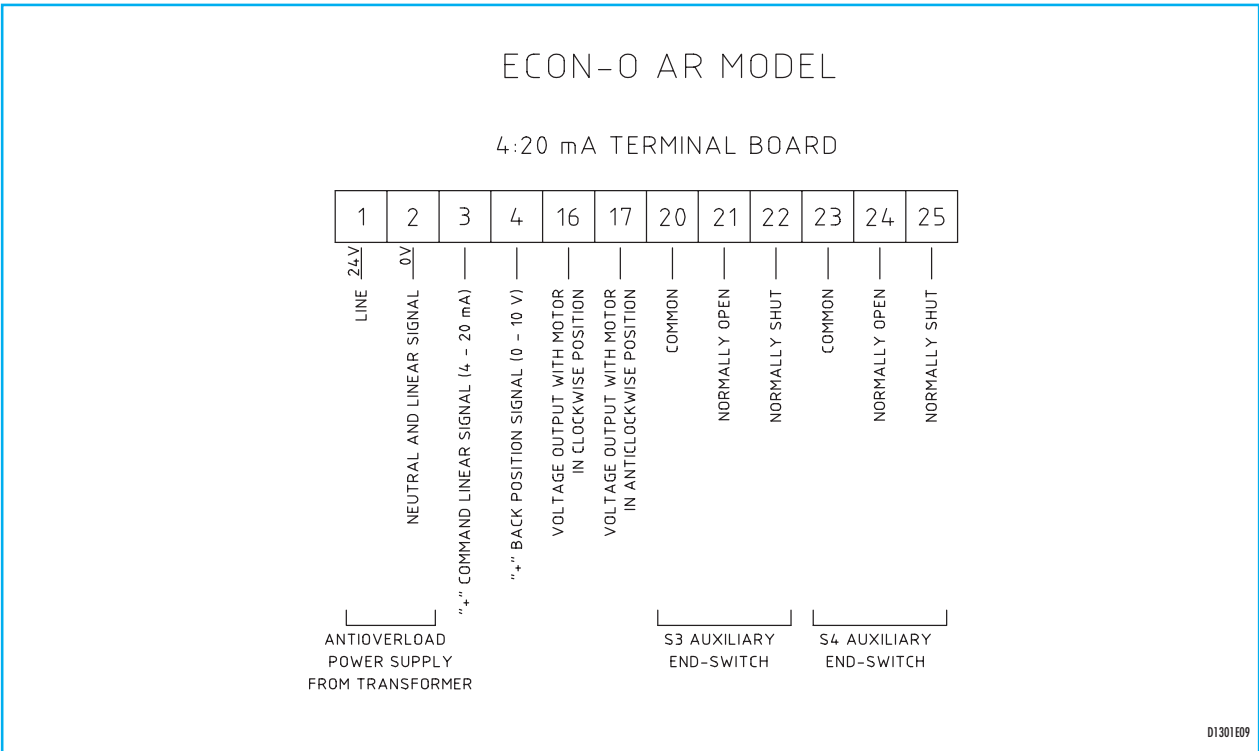
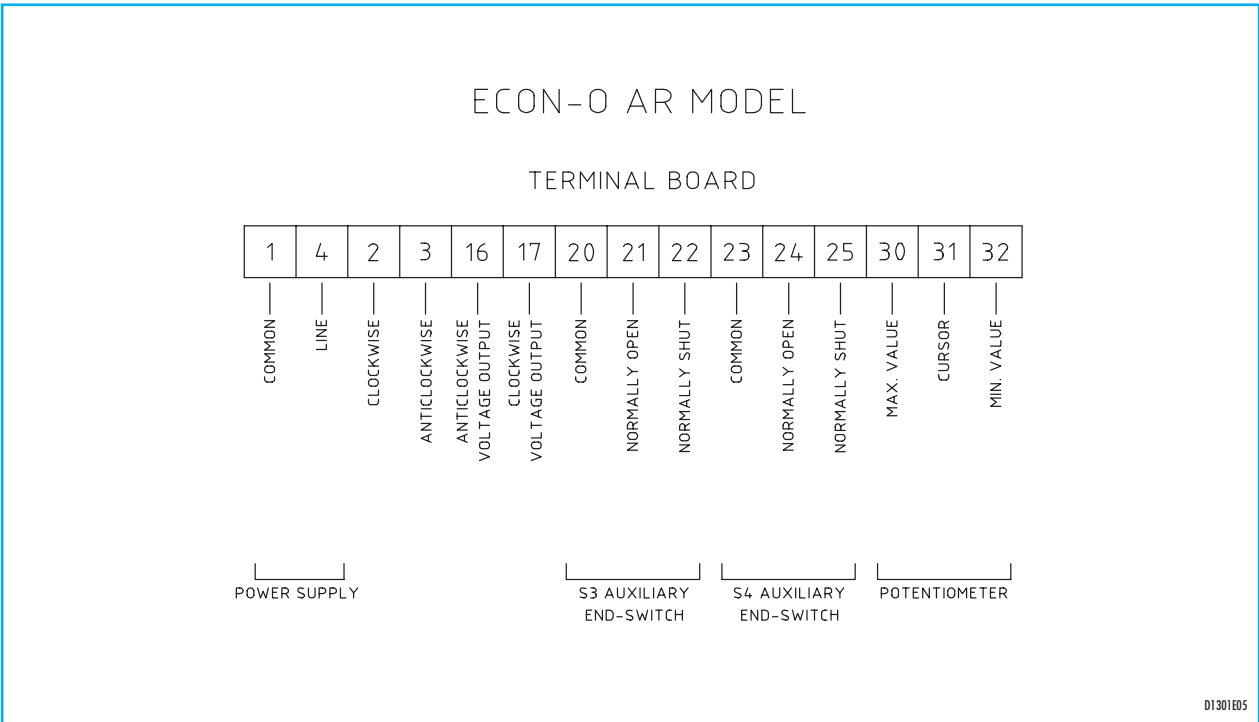


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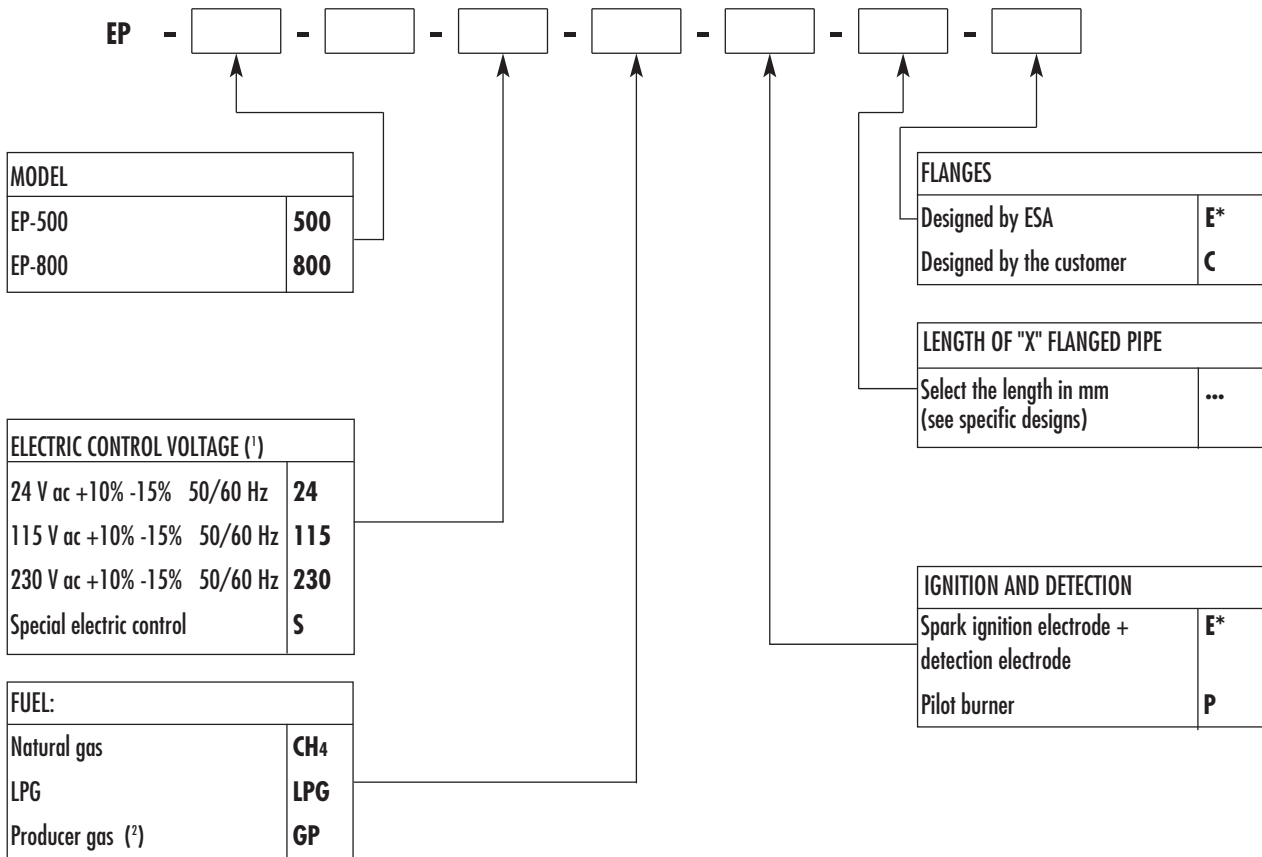
Model	AxB	C mm	D mm	E mm	F mm	G mm	H mm	M mm	L mm
EP-500	160x160	115	120	242	273	430	638	60	318
EP-800	110x110	155	182	345	380	483	745	48	300

N.B. The burner is supplied with neither electrovalves, ball valves nor flame controlling devices. In order to choose any of them please consult the following cards of ESA: E1110, E1111, E1451 and E7013.

ELECTRICAL CONNECTIONS



ORDERING INFORMATION - COMPLETE BURNER



The initials placed next to the asterisk identify standards

The burner is supplied without electrovalves, ball valves and flame control devices. To choose them please consult the following cards of ESA: E1110, E1111, E1451 and E7013.

Notes:

- (1) In the standard version: no. 2 auxiliary microswitches and no. 1 potentiometer 1,000 Ω available
- (2) Special execution carried out according to the features of the gas



NOTE: Based on the company's policy aimed at a continuous improvement on product quality, ESA-PYRONICS reserves the right to bring changes to the technical characteristics of this device without previous notice. Our catalog updated to the latest version is available on our web site www.esapyronics.com and it is possible to download modified documents

WARNING: When operating, this combustion system can be dangerous and cause harm to persons or damage to equipment. Every burner must be provided with a protection device that monitors the combustion. The installation, adjustment and maintenance operations should only be performed by trained and qualified personnel.