

# Automatic Gas Burner - EQA 181

Gas burners EQA 181 have been developed for air heating systems. They are of nozzle-mix type, lineal and compact.

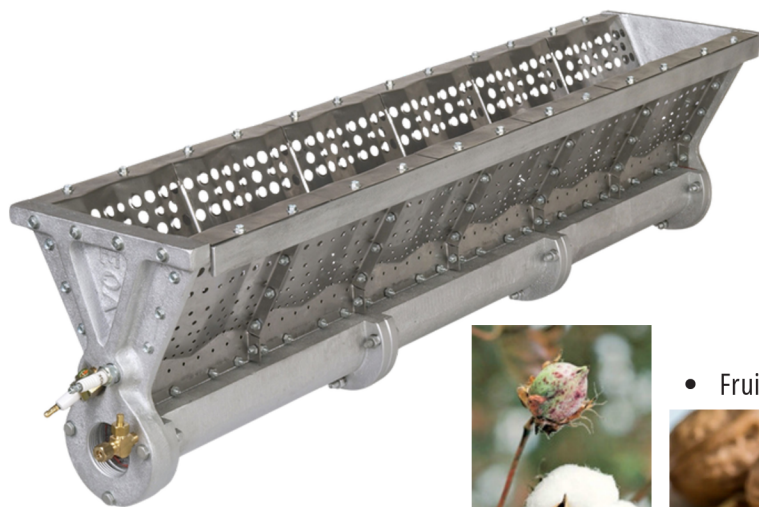
They are mainly used in air heating systems like cereal dryers and drying ovens. Their wide range of operability offers great flexibility.



## EQUIPMENT

All burners include a filter and manual shut-off ball valve. In accordance with ENARGAS standards, automatic shut-off valves with or without slow opening and/or Closed Valve Microswitch (MVC), pressure gauges, air flow control (pressure switch), high and/or low gas pressure switches, and the necessary pressure taps are provided for each capacity.

The 181 burner is available in three regulation versions: single-stage ignition, two-stage ignition with partial or total cut-off, and modulating regulation with temperature control. Given its great flexibility, as this burner can operate at up to 10% of its maximum capacity, it is ideal for modulating controls.



• Model 181-P

• Cotton Drying



• Fruits Drying



• Cloth Drying



• Cereals Drying





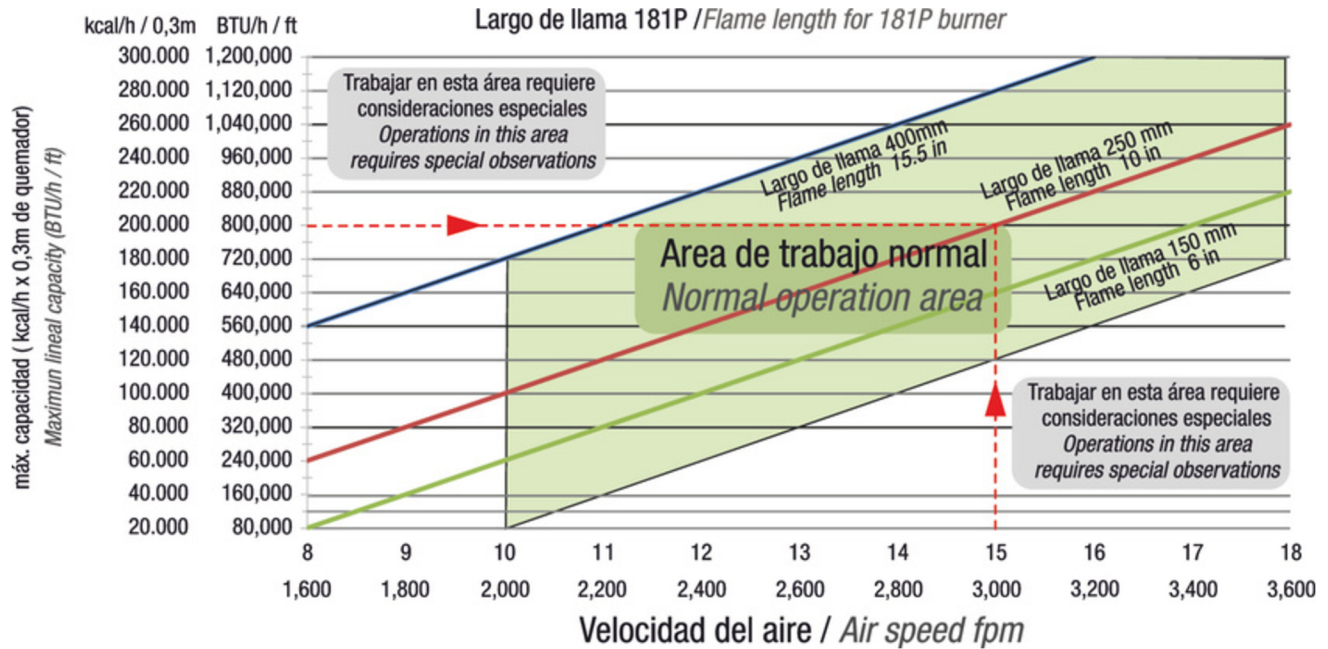
## GENERAL DESCRIPTION

The EQA 181 burner can be mounted inside or outside an air duct horizontally or vertically (upward or downward) depending on requirements. The different types of mounting are shown in the illustrations on the following pages. All the air required for combustion is supplied by one or two centrifugal fans.

Its excellent design allows for a homogeneous air-gas mixture, which ensures complete combustion and prevents carbon monoxide particles from being found in the combustion products.

When air velocity permits, it is possible to use the 181P burner (without built-in fan), i.e., taking advantage of the existing air flow, provided that it does not contain impurities, high humidity, or excessive temperature.

A wide range of air speeds can be used for optimal burner operation: from 10 m/sec. to 18 m/sec. (for higher speeds, please consult us). To determine the flame lengths, see the following table:



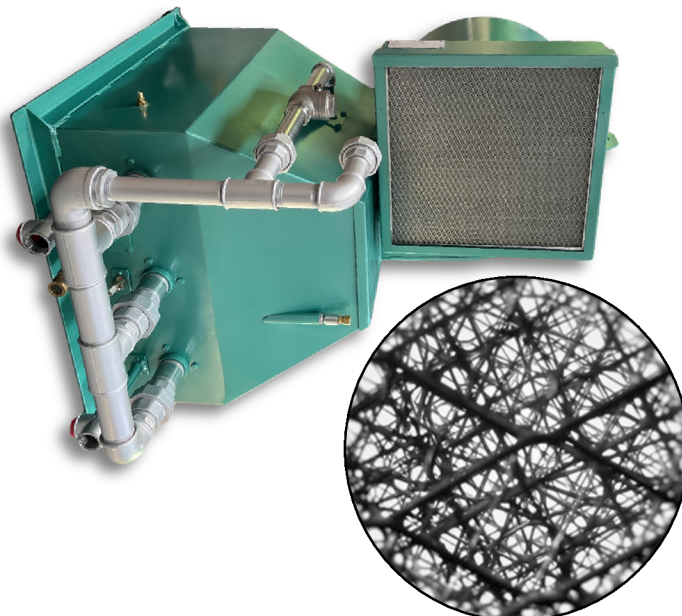
The chart shows the lineal capacity in Btu/h/ft for a 181P burner. Example: a burner of 2,400,00 Btu/h installed in a conduit with a length of 36 in. and an air velocity of 3,000 fpm, will have a lineal capacity of 800,000 Btu/h /ft and a flame length of 10 in.

## AIR INTAKE FILTERING UNIT (OPTIONAL)

The equipment is designed to operate with an optional filtering unit, specifically developed for environments with airborne solid particles (e.g., grain husks or peanut shells). This component can be supplied factory-installed or purchased as a standalone kit for easy integration into existing equipment, requiring no major structural modifications.

Features and Operation:

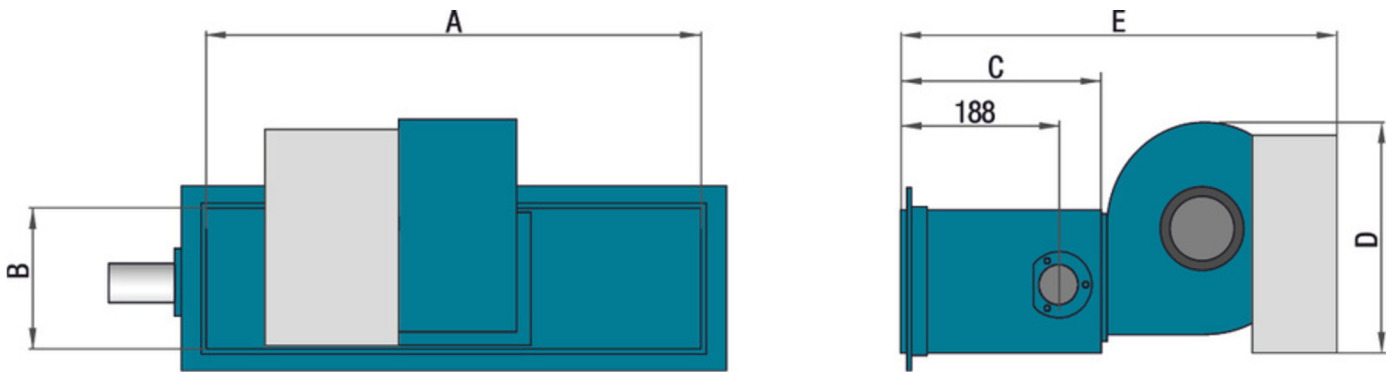
- Purpose: Ensures clean combustion air by capturing particles before they enter the fan. This prevents particle incineration and the subsequent projection of carbonized residues (char/cinder) onto the processed product, safeguarding the quality of the drying or roasting process.
- Construction: The filter cartridge features a galvanized steel frame and mesh. This material selection provides excellent durability and corrosion resistance in humid environments.
- Maintenance: Designed for simple assembly and quick cleaning (using compressed air or pressurized water), facilitating the maintenance of optimal airflow for combustion.





## MODELOS Y DIMENSIONES

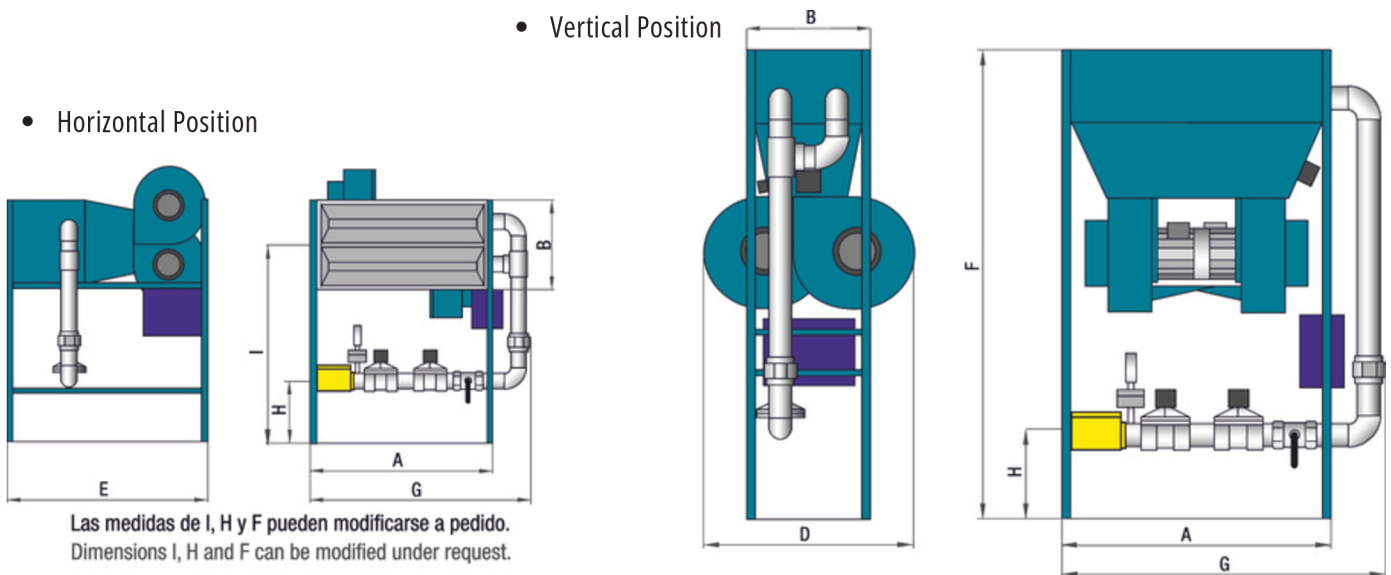
### EQA 181 STANDARD



### EQA 181 SPECIAL CONFIGURATION

- Vertical Position

- Horizontal Position



Las medidas de I, H y F pueden modificarse a pedido.  
Dimensions I, H and F can be modified under request.

### DIMENSION (in mm) AND CAPACITIES

	Capacity (Max) kcal/h (x1000) <sup>(1)</sup>	Capacity (Max) Btu/h (x1000) <sup>(1)</sup>	A	B	C	D	E	F	G	H	I	Qty of Fans	Fan Motor Power
181-C	100 <sup>(2)</sup>	400 <sup>(2)</sup>	195	200	280	240	400	-	-	-	-	1	0.1 HP <sup>(4)</sup>
	300	1200	343	200	280	407	710	1000	440	-	-	1	0.5 HP <sup>(3)</sup>
	400	1600	490	200	280	407	710	1000	560	-	-	1	0.5 HP <sup>(3)</sup>
	600	2000	639	200	385	407	815	1500	770	310	1000	1	1 HP
	800	3200	935	200	580	524	1085	1500	1095	310	1000	1	2 HP
	1000	4000	935	200	580	570	1115	1700	1395	310	1000	1	3 HP
	1250	5000	1231	200	580	615	1150	1700	1695	310	1000	1	4 HP
	1700	6800	1527	200	580	615	1150	1700	1695	310	1000	1	5.5 HP
	1500 <sup>(5)</sup>	6000 <sup>(5)</sup>	935	390	580	675	1150	1700	1095	310	1000	1	5.5 HP
	2000 <sup>(5)</sup>	8000 <sup>(5)</sup>	935	390	580	675	1150	1700	1095	310	1000	1	7.5 HP
2500 <sup>(5)</sup>	10000 <sup>(5)</sup>	1527	390	580	960	1150	1700	1695	310	1000	2	4 HP	
3500 <sup>(5)</sup>	13890 <sup>(5)</sup>	1823	390	600	960	1150	1700	2000	310	1000	2	5.5 HP	
181-L	500	2000	343	200	280	407	710	1000	440	-	-	1	0.5 HP <sup>(3)</sup>
	600	2400	490	200	280	407	710	1000	560	-	-	1	0.75 HP <sup>(3)</sup>
	800	3200	639	200	385	407	815	1500	770	310	1000	1	1.5 HP
	1000	4000	639	200	385	524	890	1500	770	310	1000	1	2 HP
	1500	6000	935	200	580	615	1150	1700	1095	310	1000	1	4 HP
	2000	8000	1231	200	580	615	1150	1700	1395	310	1000	1	5.5 HP
	2700	10700	1527	200	580	615	1150	1700	1695	310	1000	1	7.5 HP
	3000 <sup>(5)</sup>	11900 <sup>(5)</sup>	935	390	600	960	1150	1700	1095	310	1000	2	4 HP
4000 <sup>(5)</sup>	15870 <sup>(5)</sup>	1823	390	600	960	1150	1700	2000	310	1000	2	7.5 HP	

1. For LPG with a Butane content over than 50%, a capacity reduction of 10 to 15% must be considered depending on the % content.

2. For LPG only up to 75.000 Kcal/hour.

3. Available in Three-phase and Single-phase motors.

4. Available only in Single-phase motors.

5. Burners with double line of fire.



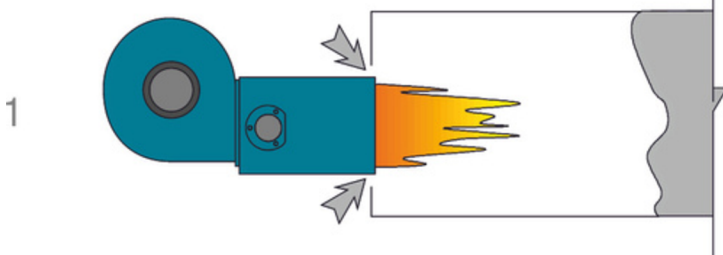
## DIFFERENT VERSIONS

According to the process in which the burner is to be applied, the EQA 181 burner can be acquired with different flame areas (amplified or standard) and flame length (short or standard).

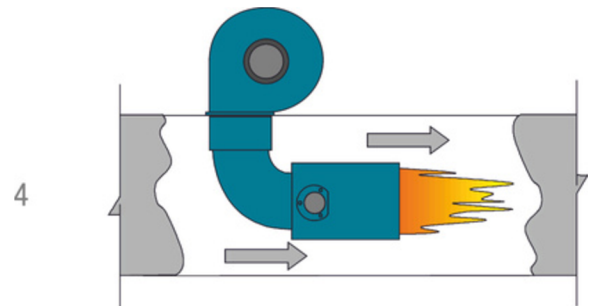
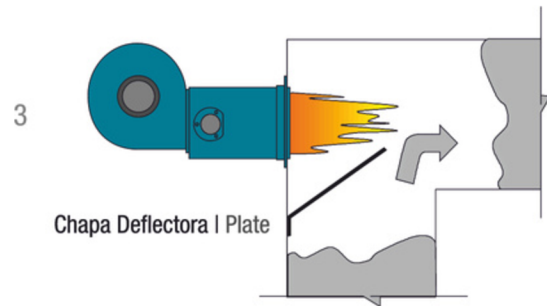
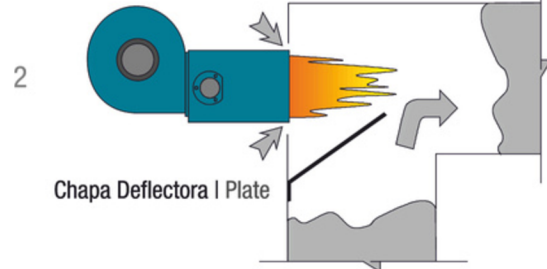
This is achieved adding modules which increase the flame generation section, shortening the flame and distributing it homogeneously. In the EQA-181P burner (without fan), the minimum quantity of modules admitted is calculated according to the air speed. If you wish to cover the entire width of the air stream, there is no limit to the maximum number of modules that can be used (consult the factory in such cases). The models of 6,000,000 BTU/H and higher can be manufactured with double line of fire.

## APPLICATION EXAMPLES

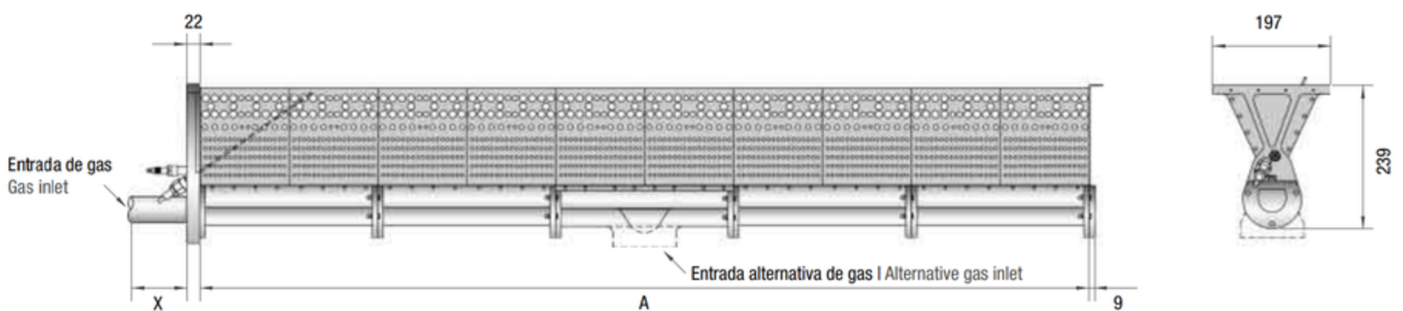
### • Fresh Air Inlet System



### • Recirculating Air System



## EQA 181 P



## DIMENSIONS (in mm) AND CAPACITIES

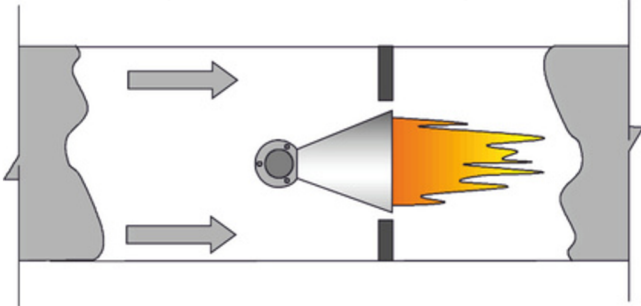
Capacidad (Kcal/h)	100	200	300	400	600	800	1000	1250	1500	2000	2500	2800	3000	4000	5000
Capacidad (BTU/h)	400	800	1200	1600	2400	3200	4000	5000	6000	8000	10000	11200	12000	16000	20000
A*	148	296	444	592	888	1184	1480	1850	2220	2960	3700	4144	4440	5920	7400
X	Depending on duct dimensions														

Capacities in BTU/hour x 1,000 (\*) These dimensions are for an air velocity of 2,000 FPM. For other velocities consult us.

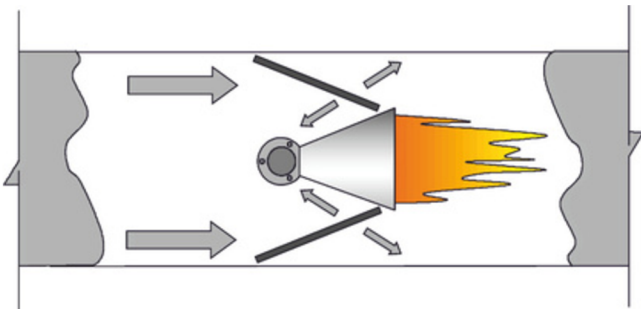


## APPLICATION EXAMPLES

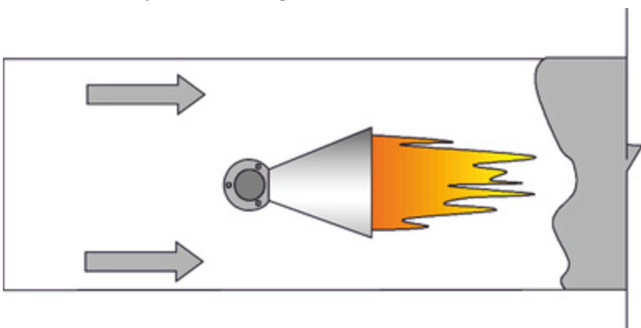
- Standard Application  
With fixed plates to increase air velocity.



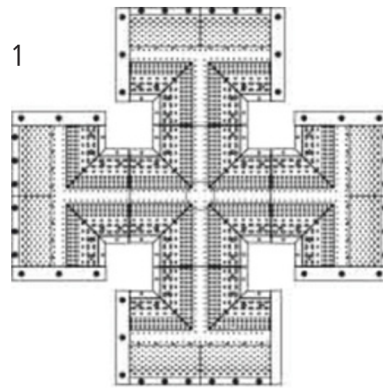
- Application with dampers to regulate air velocity.



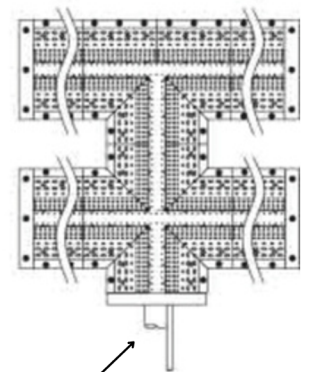
- Without plates. For tight air ducts.



## OTHER CONFIGURATIONS



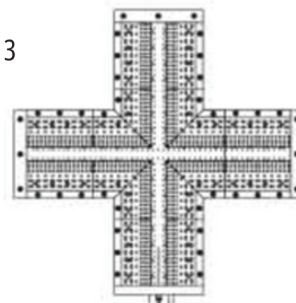
2



To Burner

To Pilot

3



To Burner

To Pilot



At EQA, we strive to minimize our environmental impact through sustainable and responsible practices. Therefore, we encourage you to join our commitment and, at the end of the product's lifecycle, adhere to the current Municipal, Provincial, and National regulations regarding the classification, recycling, destruction, or disposal of the product, spare parts, non-reusable parts, and packaging. By doing so, we prevent environmental damage and promote reuse and recycling whenever possible. Thank you for your commitment and efforts in joining these actions.