

# LINEAR FLAME BURNERS

## RIBBON AB/ABM SERIES

### FEATURES

- Burner body (standard): iron
- Burner body (optional): AISI321 or AISI316
- Mounting flange: Aluminium, Cast iron
- Mixture pressure: 0.5÷2.5 mbar
- Adequate to different types of gas: CH4/L.P./propane/etc.
- Easily replaced electrodes.
- Burner customization on request.
- Turndown Range: 1/3

### AB

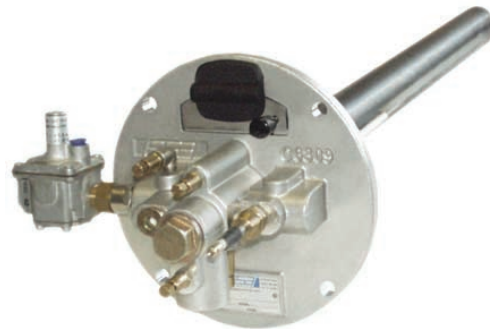


F301001

### APPLICATIONS

- Over air heating.
- Bakery furnaces.
- Vial sterilizing machines.
- Industrial packing machines.
- Braze welding machines.

### ABM



F301002

### DESCRIPTION

RIBBON AB burners are suitable for different industrial thermal processes. ABM series is the RIBBON burner version with air & gas mixing flange. The particular shape of the RLF (Ribbon Linear Flame) ensures excellent flame stability even in combustion chambers with internal recirculation.

Modulation of the motorized butterfly valve together with the zero regulator placed on the gas pipe allows for flow adjustment. Changes in the capacity may be obtained through the air valve; the mixer and the zero regulator keep the gas flow constant and proportional.

### 3 ZONE



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## INSTALLATION

RIBBON AB burners may be mounted to operate in any position, flame down is not recommended. Mounting flanges with spark electrode and peepsight may be supplied for fixing the burner. Flexible connectors are recommended for air and gas piping

connections. Piping from the mixer outlet to burner or burners must be at least as large as the mixer outlet pipe. No valves or other restriction are permitted in this pipe.

## IGNITION AND FLAME DETECTION

Firing of RIBBON AB burners is done through high voltage discharge supplied by an electrode. Flame detection occurs through separate electrode or single electrode. In the latter case, flame controls are

required through Microprocessor (ESA ESTRO) together with an ignition transformer TAR-10 series.

Model	Pilot burner ignition		Electrode ignition
	Ignition	Detection	Ignition/Detection *
8AB	(not available)	(not available)	WAND
10AB	(not available)	(not available)	WAND
12AB	(not available)	(not available)	WAND
16AB	(not available)	(not available)	WAND
20AB	(not available)	(not available)	WAND

\* Flame detector UV-2-CHLG-2 on request

## CAPACITY TABLES

Ribbon Model	Package Width mm	Capacity (1) kW	Flame length (2) mm
RLF - 3	7	30	50÷150
RLF - 5	12	50	50÷200

<sup>1</sup> Maximum capacity (kW) obtained from 400÷1600 mm of foliated package at 20° C.

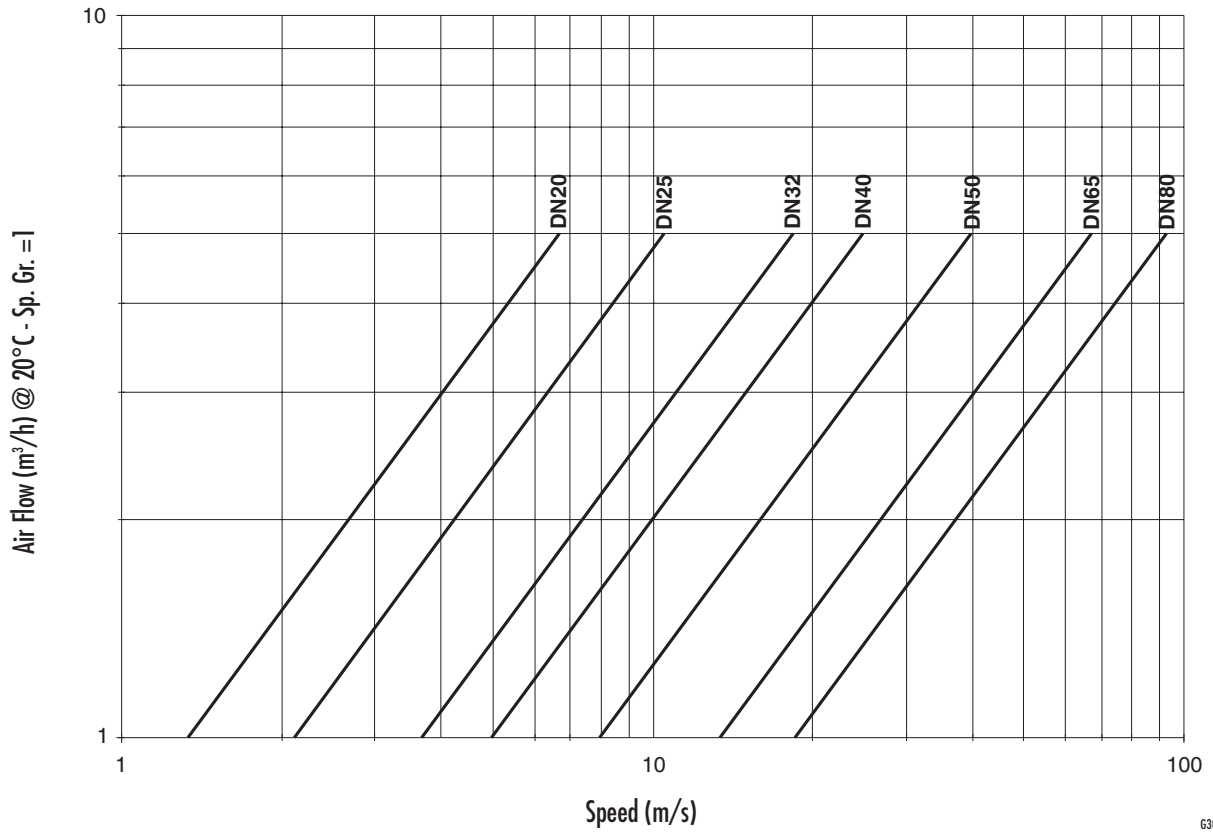
<sup>2</sup> Flame length are approximate, referred to burner feeded with natural gas, free air, working at stoichiometric ratio and at nominal capacity.

<sup>3</sup> ABM maximum capacity 30 kW.

Ribbon Model	Capacity according to the temperature kW/400÷1600 mm							
	100 °C	150 °C	200 °C	250 °C	300 °C	350 °C	400 °C	450 °C
RLF - 3	22.0	19.4	17.3	15.7	14.3	13.2	12.2	11.3
RLF - 5	36.6	32.3	28.9	26.1	23.8	21.9	20.3	18.9

The chart above lists the capacities at different operating temperatures.

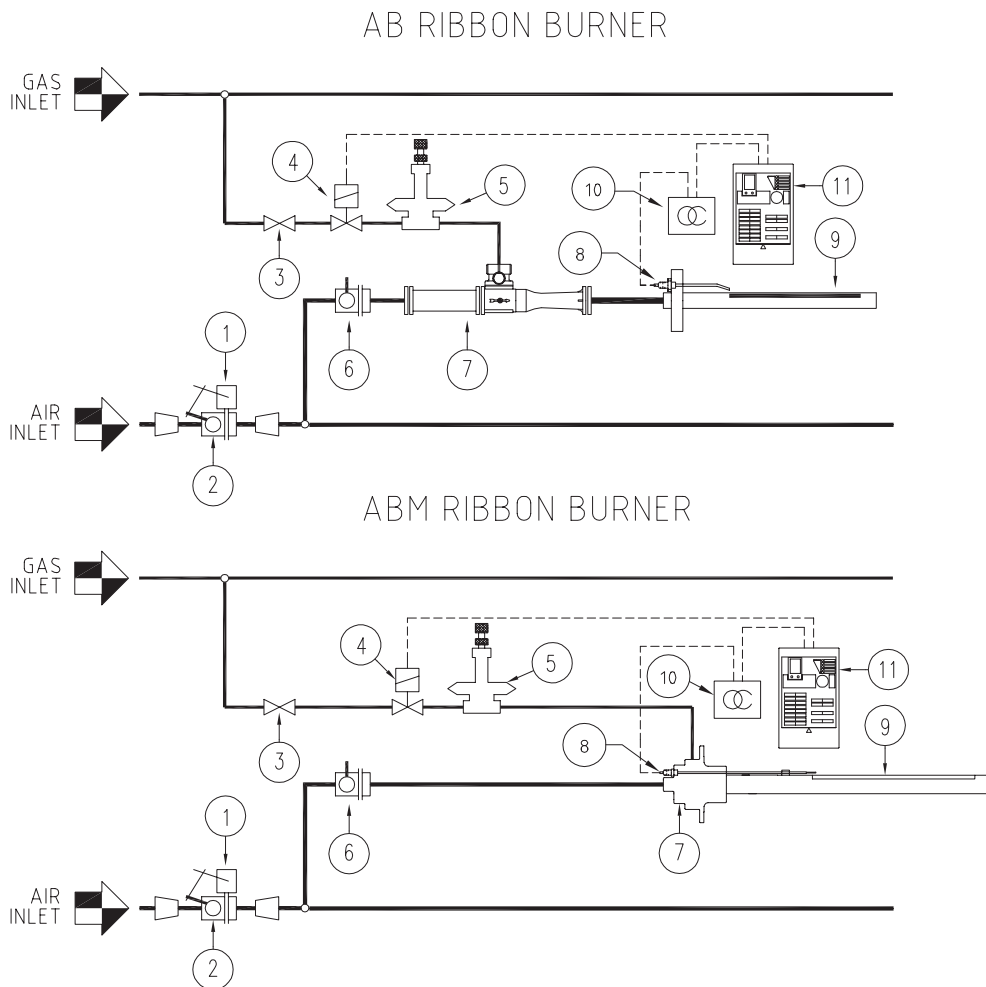
## PIPING FLOW SPEED TABLE



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For the corret selection of the AB type we suggest a maximun velocity 5 m/s.

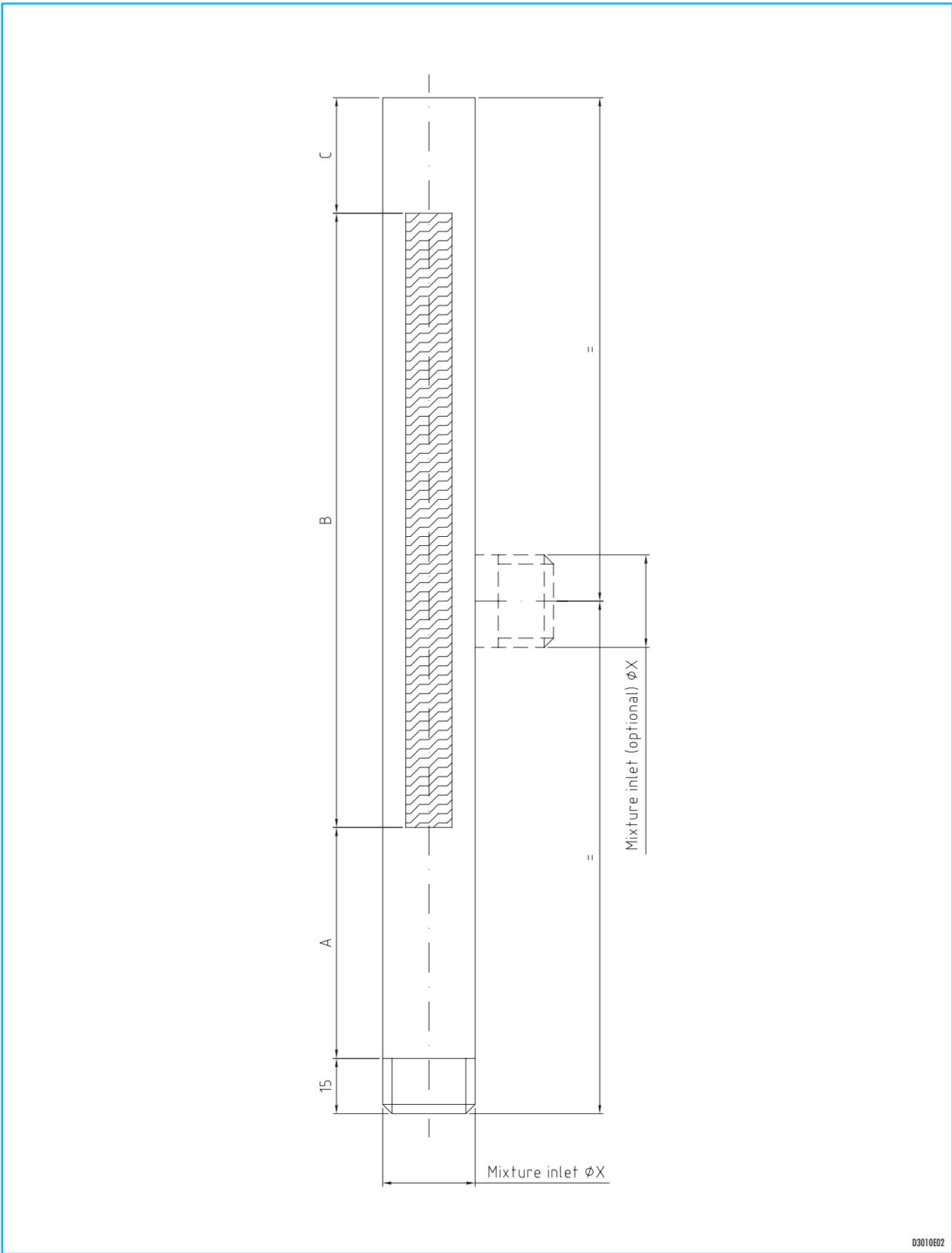
## FLOW CHART



Pos.	Description
1	Electric control
2	Motorized butterfly air valve/Valvola a sfera di intercettazione gas
3	Gas ball valve
4	Safety solenoid gas valve
5	Zero regulator
6	Manual butterfly air valve
7	Mixer
8	Spark electrode and flame rod
9	Ribbon burner
10	Ignition transformer
11	Flame control

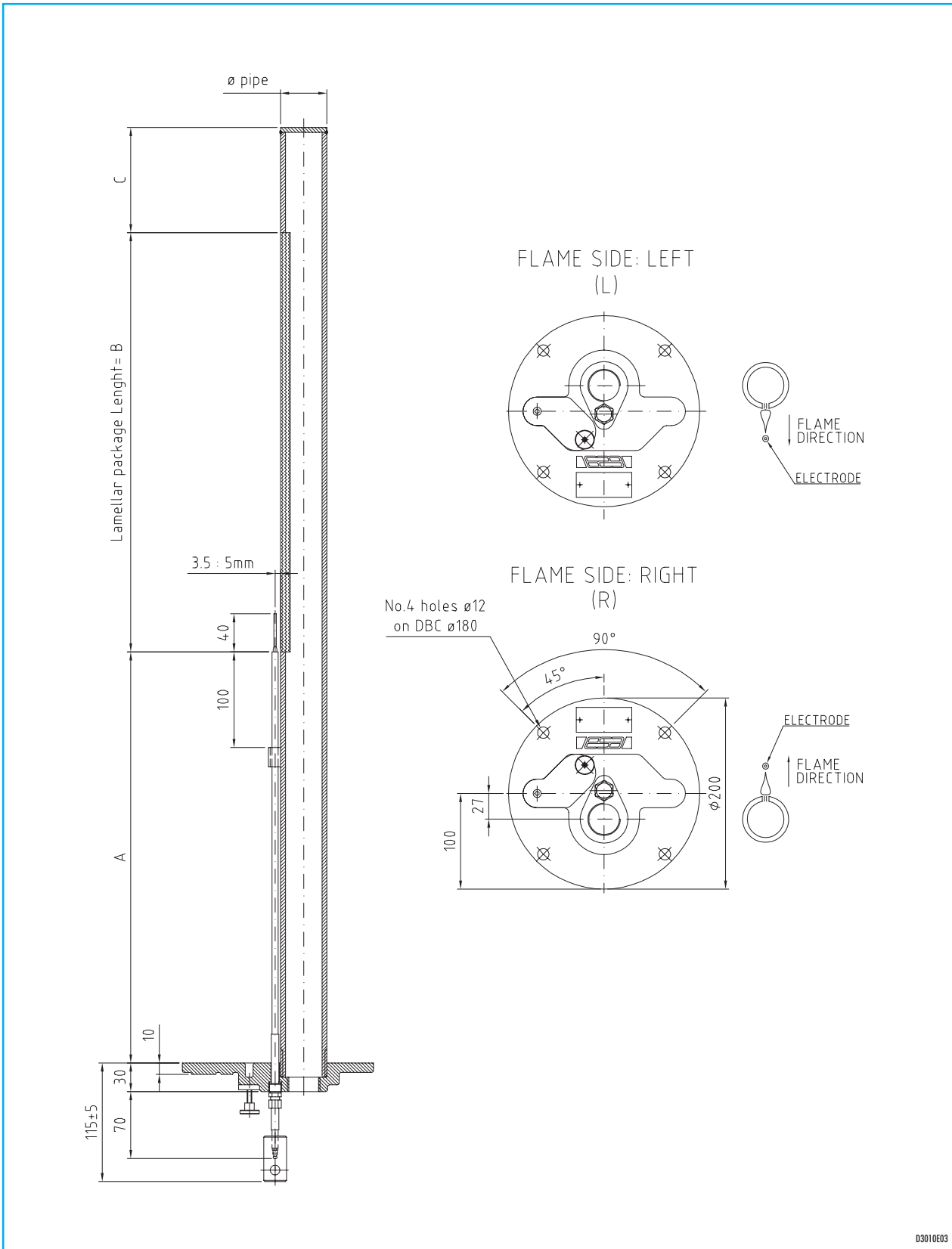
D3010E01

### DIMENSIONS AB SERIES (ONLY TUBE)

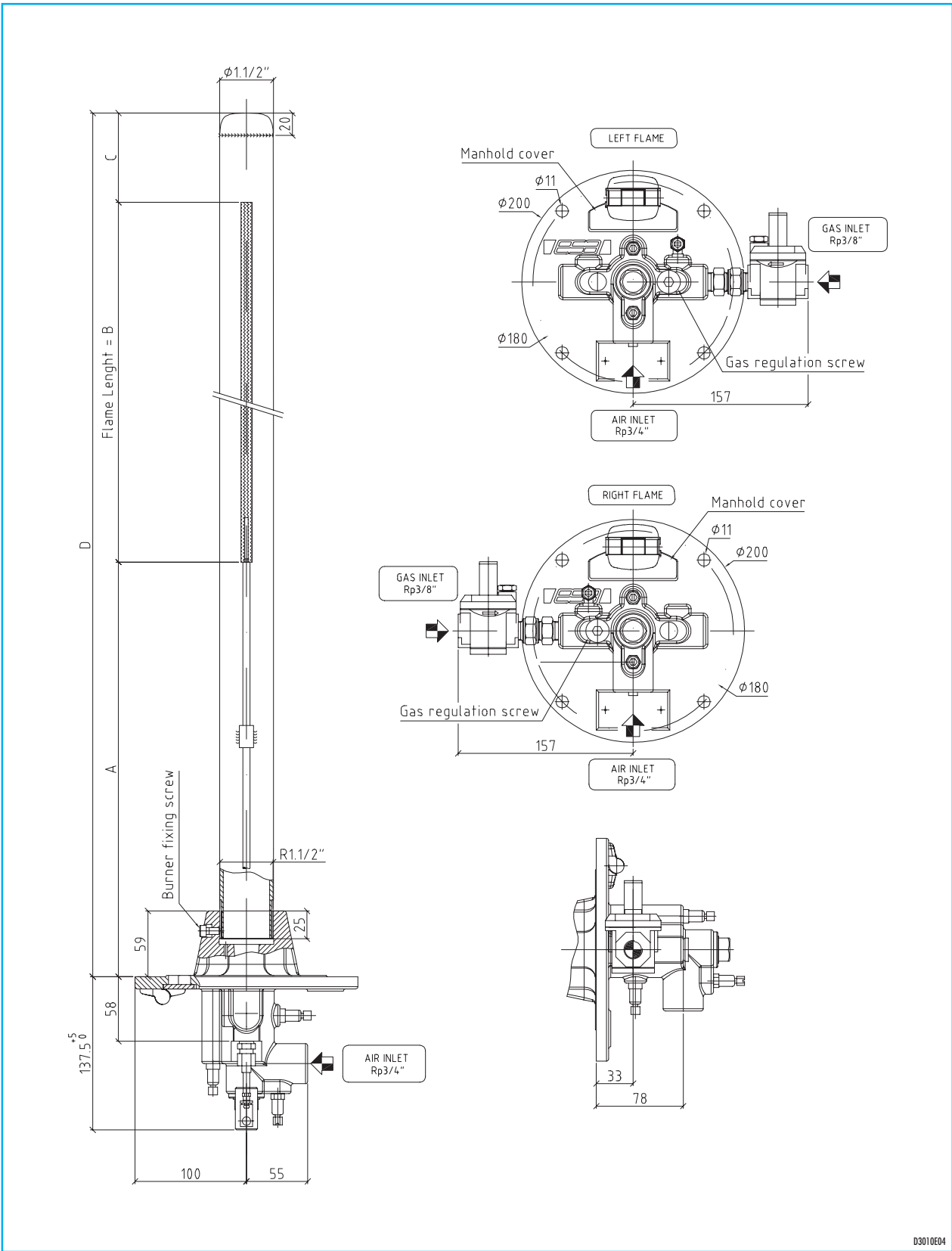


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DIMENSIONS AB SERIES



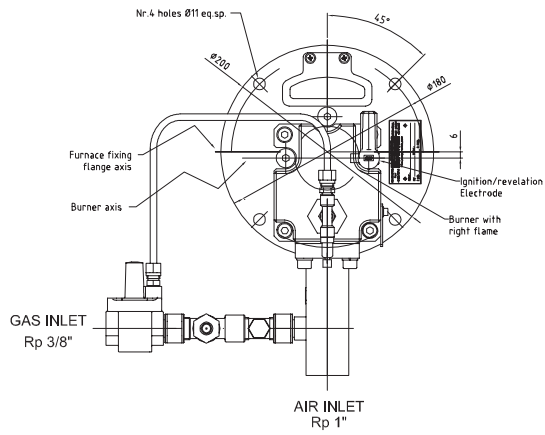
DIMENSIONS ABM SERIES



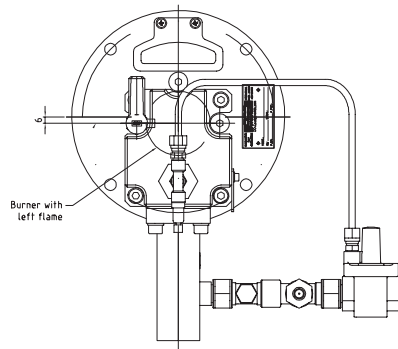
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DIMENSIONS 3 ZONE SERIES

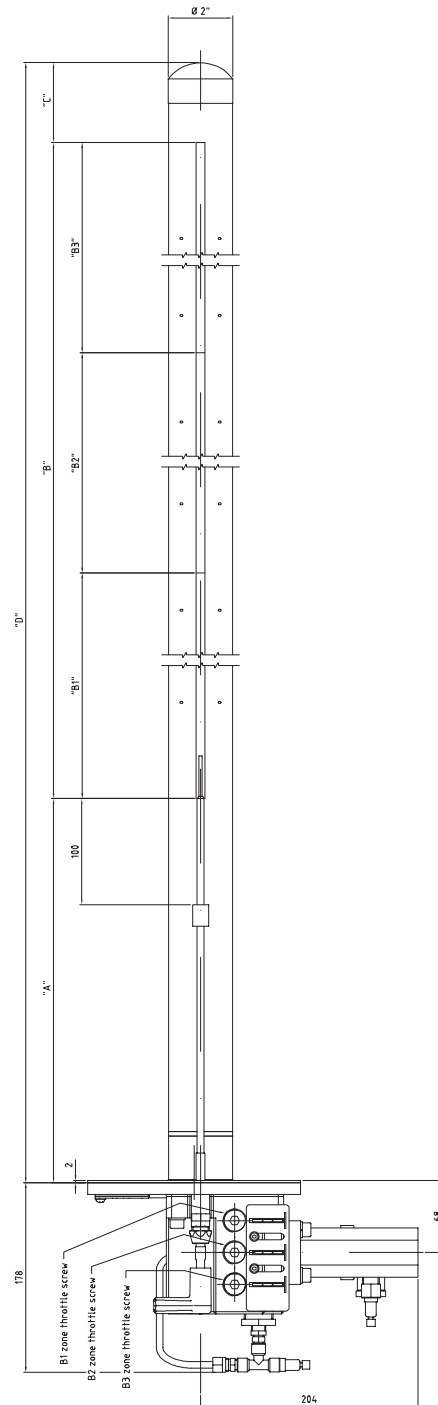
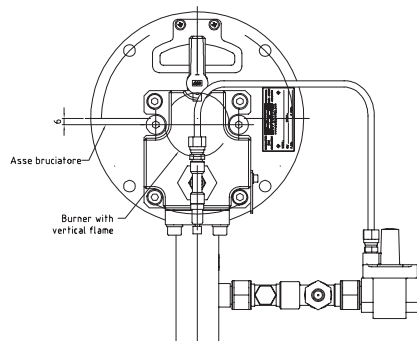
RIGHT FLAME MODEL



LEFT FLAME MODEL

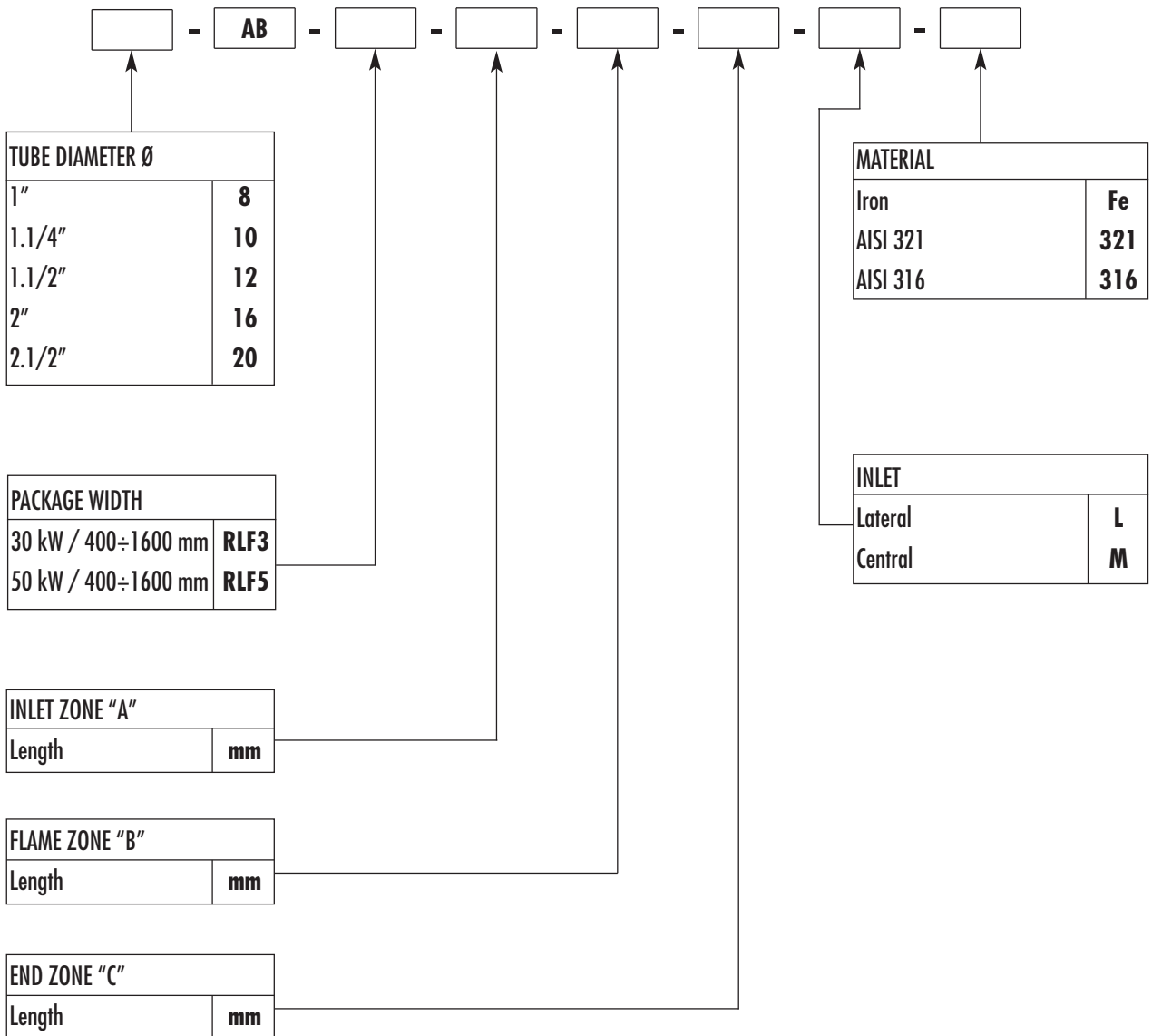


VERTICAL FLAME MODEL

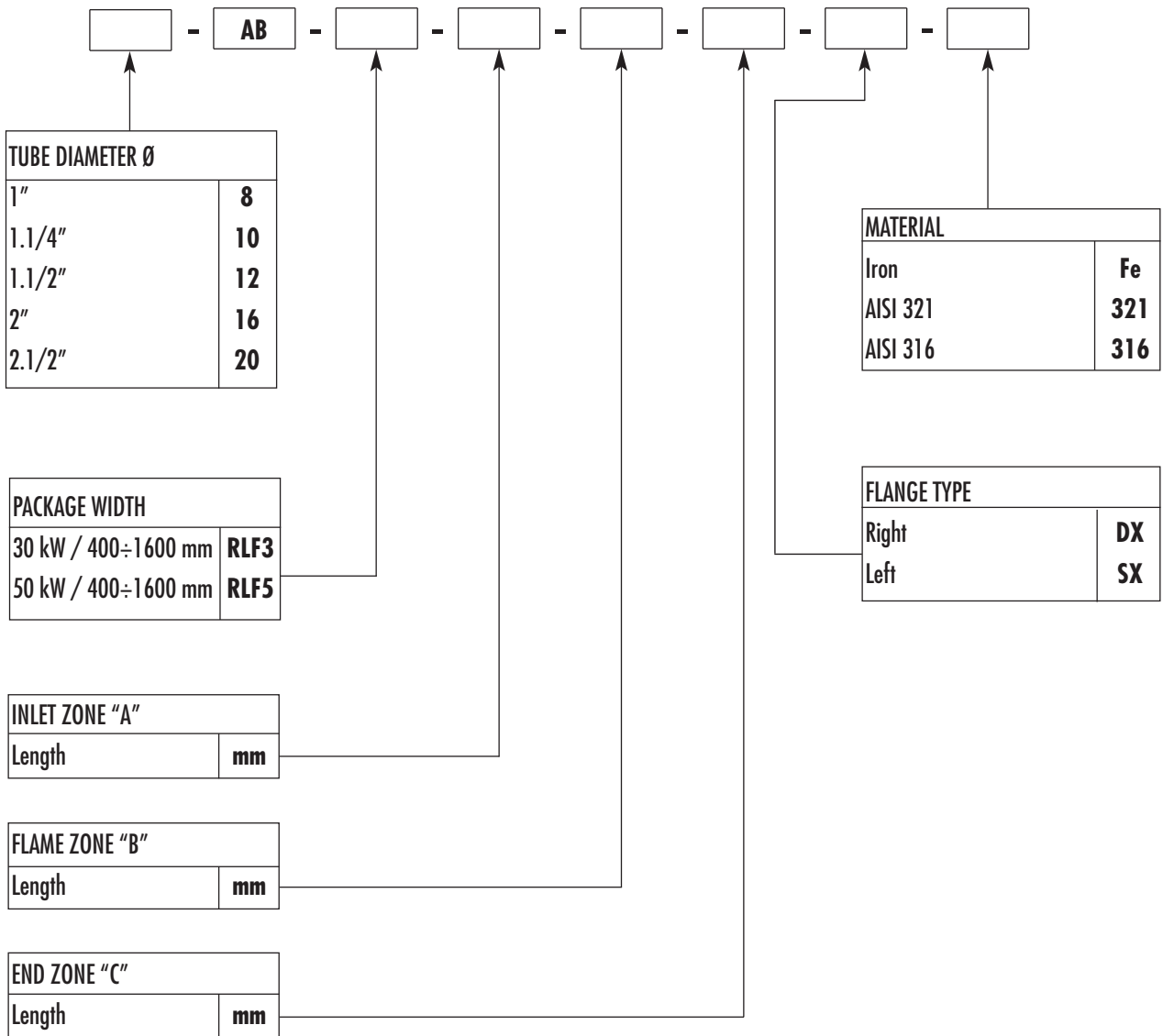


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ORDERING CODE - BURNER AB SERIES ONLY TUBE



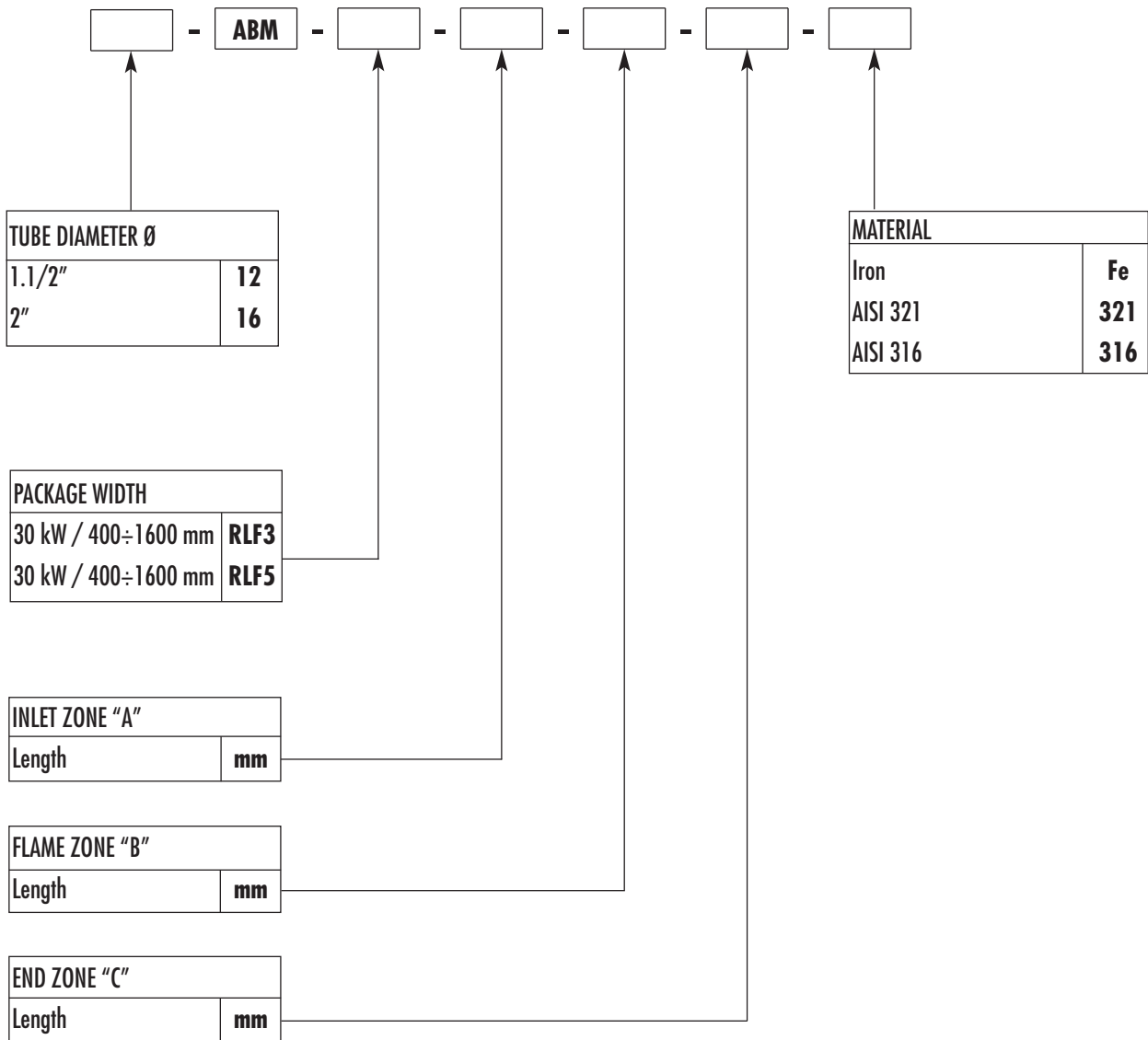
ORDERING CODE - BURNER AB SERIES



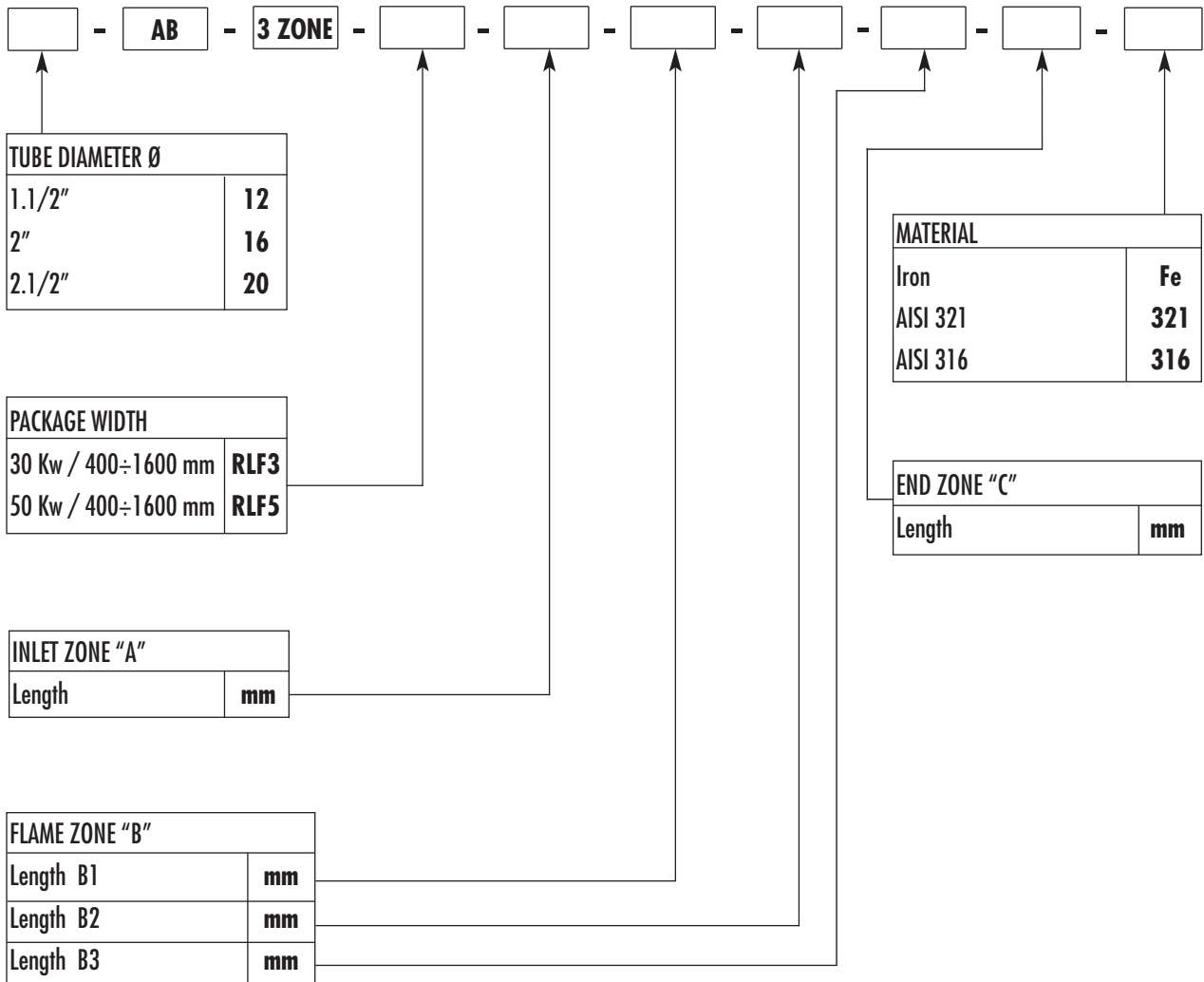
Note:

<sup>1</sup> Burner 20AB with special flange on request

ORDERING CODE - BURNER ABM SERIES



ORDERING CODE - BURNER 3 ZONE SERIES



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](http://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.