GAS OIL BURNERS
12XDF SERIES

FEATURES

- Mixer body: cast iron G25
- Plate: iron
- Pre-heated air: up to 450°C
- Max capacity: 50÷100 kW
- Air pressure at burner: 45 mbar
- Atomization air pressure: 200÷300 mbar
- Adequate to different types of light oils: viscosity up to 3°E
- Oil operating turndown range: 6÷1
- Excellent flame stability with: excess air
  excess fuel
  on ratio firing
- Patented atomization.
- Low NO_x level.
- Separated air and gas inlets, mixing at discharge point, no flashback.

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APPLICATIONS

- Ceramic baking furnaces.
- Sanitary fittings baking furnaces.
- Forges.
- Annealing furnaces.
- Heating furnaces.
- Melting furnaces.
- Driers.
- Incinerators.
- Metallic, resin and polymer treating furnaces.
- Hot air generators.

DESCRIPTION

The 12XDF gas oil burners are nozzle mixing units designed for on ratio or large excess of air firing. The unique stepped tunnel design produces excellent flame stability at all firing rates. The calibration tables below account for different atomizing air pressures allowing for a better atomization of the fuel.

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INSTALLATION

12XDF gas oil burners are usually mounted on the wall. Other mounting positions are not recommended; specify if other mounting positions are absolutely necessary when you order it.
The furnace refractory should be set to leave some room on all sides of the block. This space should be packed with flexible, refractory, ceramic fiber protected by 20 mm of refractory concrete on all sides to allow for expansion of the walls (see technical note). Flexible connectors are recommended for air and gas connections at the burner to allow slight movement or misalignment of piping and are required when pre-heated air is involved. Air and gas connections are Pyronics' standard threaded, or welding flanged type. They may rotate by 90°.

IGNITION AND FLAME DETECTION

12XDF gas oil burners must be ignited at low fire by blast pilot, PBST. The pilot burner should be cut off after ignition of the main burner therefore flame detection must be carried out by UV-scanners placed in an anticlockwise position as compared to the pilot burner or electrode. Flame detection systems are required on all burners with furnace temperature below 750°C.

Catalog No.	Pilot burner ignition		Electrode ignition	
	Ignition	Detection	Ignition	Detection
12XDF	P64PBST	UV-2 / 6EN-150 *	Electrode C3869	UV-2

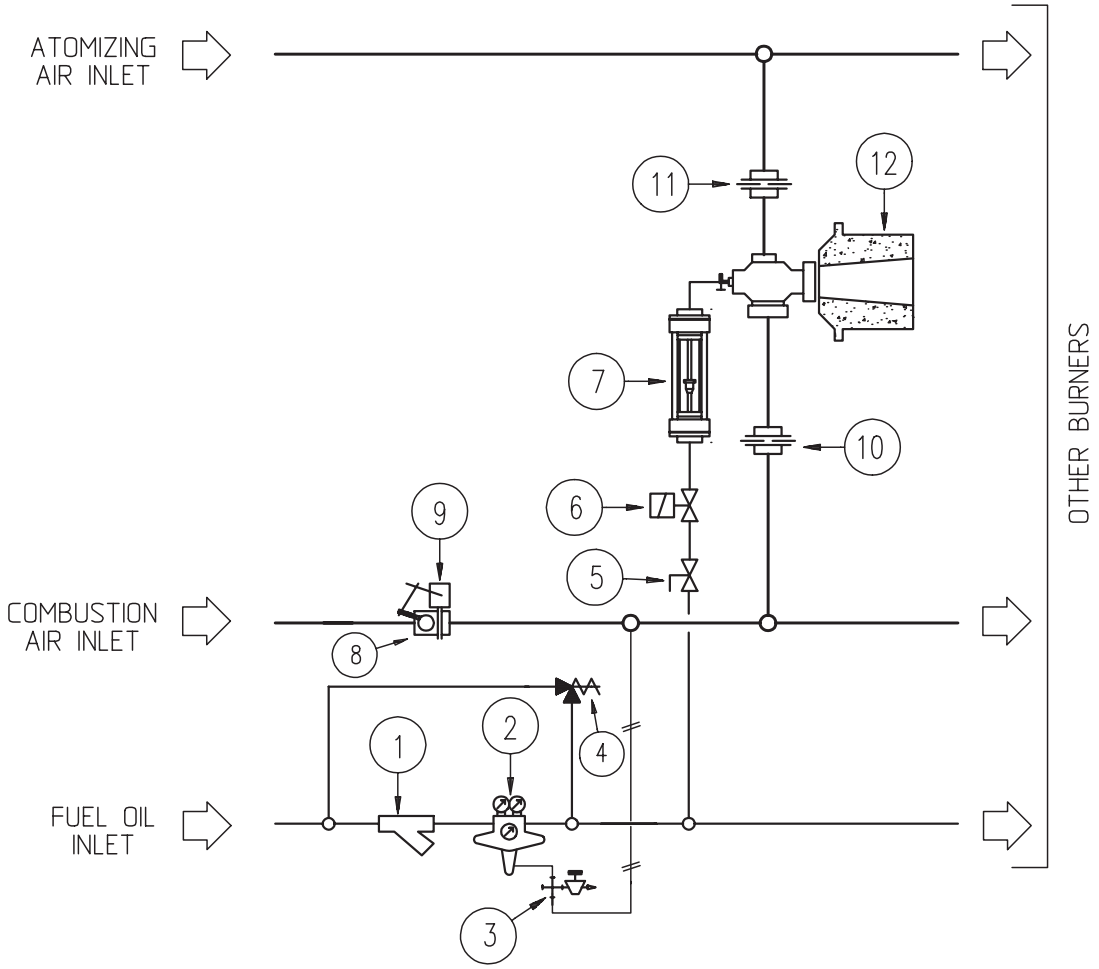
(*) In most cases, we suggest you to make flame detection through UV- scanner. In some particular cases, it is possible to use continue pilot burner with detection electrode.

CAPACITY TABLES

Model	Power	Oil pressure	Atomizing air flow	Atomizing air pressure
12XDF	50 Kw	0,8 bar	9 Nm^3/h	250 mbar
12XDF	100 Kw	1,35 bar	9 Nm^3/h	250 mbar

Flame lenght: 500÷800 mm. Flame lenght are approximate, referred to burner feeded with natural gas, free air, working at stoichiometric ratio and at nominal capacity.

FLOW CHART



Pos.	Model identification
1	Fuel-oil filter
2	Fuel-oil flow regulator
3	Impulse line
4	Safety valve
5	Fuel-oil ball valve
6	Fuel-oil safety solenoid valve at each burner
7	Flowmeter
8	Motorized air valve
9	Electric control
10	Orifice flow meter for ΔP air at each burner
11	Orifice flow meter for ΔP atomizing air
12	Gas oil burner

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DIMENSIONS