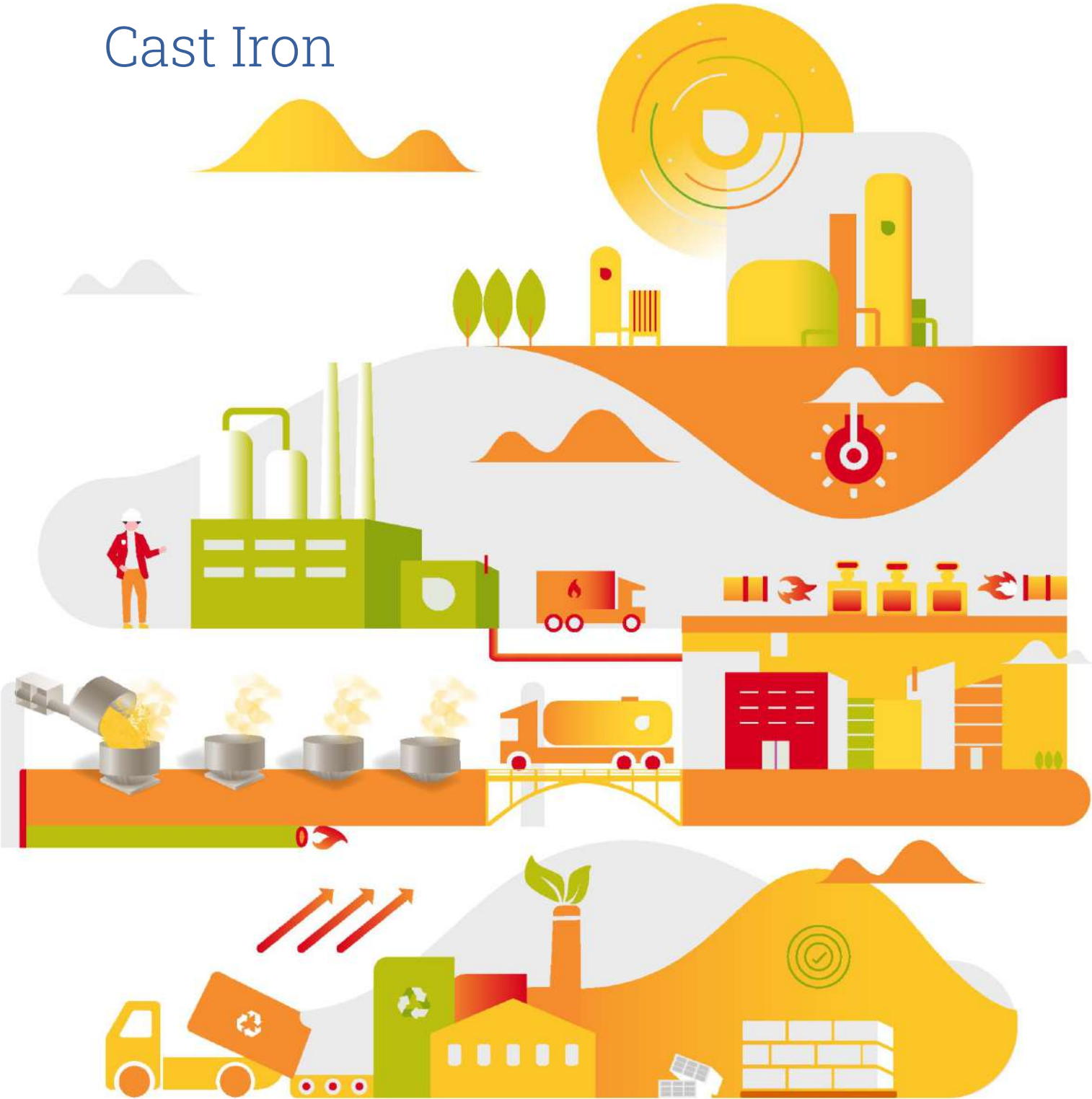


Our Combustion Equipment Sheets

Cast Iron



ALJET

- Good resistance to corrosion
- Homogeneous heat transfer
- Easy implementation
- Silent
- Flame control and self ignition
- Low momentum flame
- Low maintenance



The Concept

The **ALJET** burner is a water-cooled oxy-fuel burner especially designed for batch melting furnaces. It is adapted for operation under severe working conditions (confined or overheated enclosures).

The **ALJET** burner refers to an oxygen technology dedicated to the foundry industry (including rotary and cupola furnaces).

This burner is particularly dedicated to applications where automatic ignition system and/or flame supervision are essential.

An ignition pilot burner and a flame supervision cell can be integrated into the burner body.

Applicable Industries

The **ALJET** burner is suitable for industrial operations as cast iron melting.

Special Features

The **ALJET** burner produces a low momentum flame which minimizes dust emission and prevents any refractory aging. The pipe-in-pipe system delivers a symmetrical luminous flame. The flame shape is of cylindrical type. The fuel pipe is located inside the oxygen pipe.

The fuel gas stream surrounded by an oxygen stream is partially burnt in the burner block cavity before the flame develops in the furnace.

The **ALJET** burner is composed of :

- A metallic burner body inserted in the furnace wall or door which ensures the oxygen distribution.
- A fuel injection system.

The metallic burner body is cooled by the water flow. Experimental and modeling studies have been carried out to design the shape of the burner body in order to ensure efficient cooling.

The alloy steels employed for the metallic parts (stainless steel 316L type for the burner body and the lances, Inconel 600 type for the gas fuel injectors) offer good resistance to corrosion for the burner's "cold part" and good resistance to temperature and oxidation for the "hot part".

The **ALJET** burner concept has been developed to minimize the oxygen pressure requirements, which makes it compatible with the On-site oxygen supply (VSA).

The **ALJET** burner can operate with natural gas or with propane.

When both natural gas and propane are available, it is possible to switch from one to the other simply by replacing the natural gas lance with a propane lance, without modifying the burner body. This operation can be performed in 10 minutes per burner.

The **ALJET** burner produces a low momentum flame which minimizes dust emission and prevents any refractory wear.

The **ALJET** burner can operate from 30 % to 120 % of its nominal power rate.

The **ALJET** burner is suitable for natural gas and propane and fuel oil.

Model Range*

ALJET burner is available in six standard models:

- ALJET 1500*
- ALJET 2000*
- ALJET 2500*
- ALJET 3000*
- ALJET 5000*
- ALJET 6000*

The **ALJET** technology works with gaseous fuels (natural gas and propane).

The **ALJET** burner minimizes the oxygen pressure requirement, making it suitable for on-site oxygen production (VSA).

(*) Numbers correspond to the nominal capacity (in kW)

Technical data**

Model	Power (in kW)		
	Minimum	Nominal	Maximum
ALJET 1500	450	1500	1800
ALJET 2000	600	2000	2400
ALJET 2500	750	2500	3000
ALJET 3000	900	3000	3600
ALJET 5000	1500	5000	6000
ALJET 6000	1800	6000	7200

** Description for information.
Air Liquide reserves the right to modify this information without notice.

Nominal power (in kW)	Fuel		Injection speed (m/s) for NG and propane models
	Natural Gas	Propane	
1500	✓	✓	60
2000	✓	✓	60
2500	✓	✓	60
3000	✓	✓	60
5000	✓	✓	60
6000	✓	-	60

NG : Natural gas

All of the versions include the same burner body and refractory block. The gas fuel versions include a gas fuel lance with 3 tubes.

Related Offer

- ALJET is a part of the **BoostAL™ for Cast Iron Melting in Rotary Furnaces** offer which is designed and tailored to meet your specific needs. This comprehensive offer combines the best of Air Liquide’s gases, application technologies and expert support.

ALJET LH

- High heat transfer rate
- Compliant with the safety standards
- No noise
- Low maintenance



The Concept

The **ALJET LH** burner is a patented oxy-fuel burner especially designed for heating of ladles used in metallurgy. It is adapted for operation under severe working conditions (confined or overheated enclosures).

The configuration of this burner is of pipe-in-pipe type delivering an cylindric flame develops in the ladle. The implementation of **ALJET LH** burner accelerates the heating and also cleans the ladles from accumulated oxides and the refractory surface by improving heat transfer.

Applicable Industries

The **ALJET LH** burner is suitable for drying and heating of ladles used in metal industries such as ferrous, foundries and non ferrous industries.

Special Features

An ignition pilot burner and a flame supervision cell can be integrated into the burner body.

The configuration of **ALJET LH** burner is of pipe-in-pipe type: the fuel pipe is located inside the oxygen pipe. The fuel and oxygen mix at the burner outlet and the flame develops in the ladle.

The **ALJET LH** burner is composed of :

- A metallic burner body which ensures the oxygen distribution.
- A fuel injection system.

The metallic burner body is cooled by either the water flow or not, depending on the models.

Experimental and modeling studies have been carried out to design the shape of the burner body in order to ensure efficient cooling.

The alloy steels employed for the metallic parts offer good resistance to corrosion for the burner's "cold part" and good resistance to temperature and oxidation for the "hot part".

The **ALJET** burner produce a low momentum flame which minimizes dust emission and prevents any refractory wear.

The asymmetric luminous flame delivered by the **ALJET LH** burner enables the radiation to be adjusted. The flame shape is of cylindrical type.

The **ALJET LH** burner requires low oxygen and fuel inlet pressures.

The **ALJET LH** burner has been designed to minimize the frequency of maintenance and to make inspection easier (quick dismantling of the components of the burner). Thanks to a low pressure drop and low gas velocities, the operation of the **ALJET LH** burner is silent.

The mixture of the fuel and oxygen at the **ALJET LH** burner outlet prevents the premixing and risk of backfiring.

Model Range

ALJET LH is available in two standard models:

ALJET 1500* LH

ALJET 750* LH

Each model comes in one natural gas fuel version.

The **ALJET 1500 LH** burner is available in one standard natural gas version.

The natural gas version comprises :

- A metallic burner body which ensures the oxygen distribution.
- a Natural gas lance equipped with an inner oxygen tube and gas feeder

A gasket positioned between the gas feeder and the burner body.

The metallic burner body is cooled by the water flow. Experimental and modeling studies have been carried out to design the shape of the burner body in order to ensure efficient cooling.

The ignition pilot burner and flame supervision cell are not supplied with the burner. However, it is possible to order them. Due to the supervision of the flame through the main oxygen pipe for the **ALJET 1500 LH**, the flame detection is efficient even at low firing rate.

The **ALJET 750 LH** burner model is available in one standard natural gas version.

The natural gas version comprises:

- A burner body made of stainless steel equipped with a VITON gasket, the nozzle of the burner body is made of high temperature resistance stainless steel:
- A fuel lance made of stainless steel equipped with a VITON gasket, the injector of the fuel lance is made of high temperature resistance stainless steel.

The ignition pilot burner and flame supervision cell are supplied with the burner.

The ALJET 750 LH model is of non-water-cooled type.

(*) Numbers correspond to the nominal capacity (in kW)

Technical data**

Model	Power (in kW)		
	Maximum	Nominal	Minimum
ALJET 1500 LH	1800	1500	450
ALJET 750 LH	1000	750	400

** Description for information.

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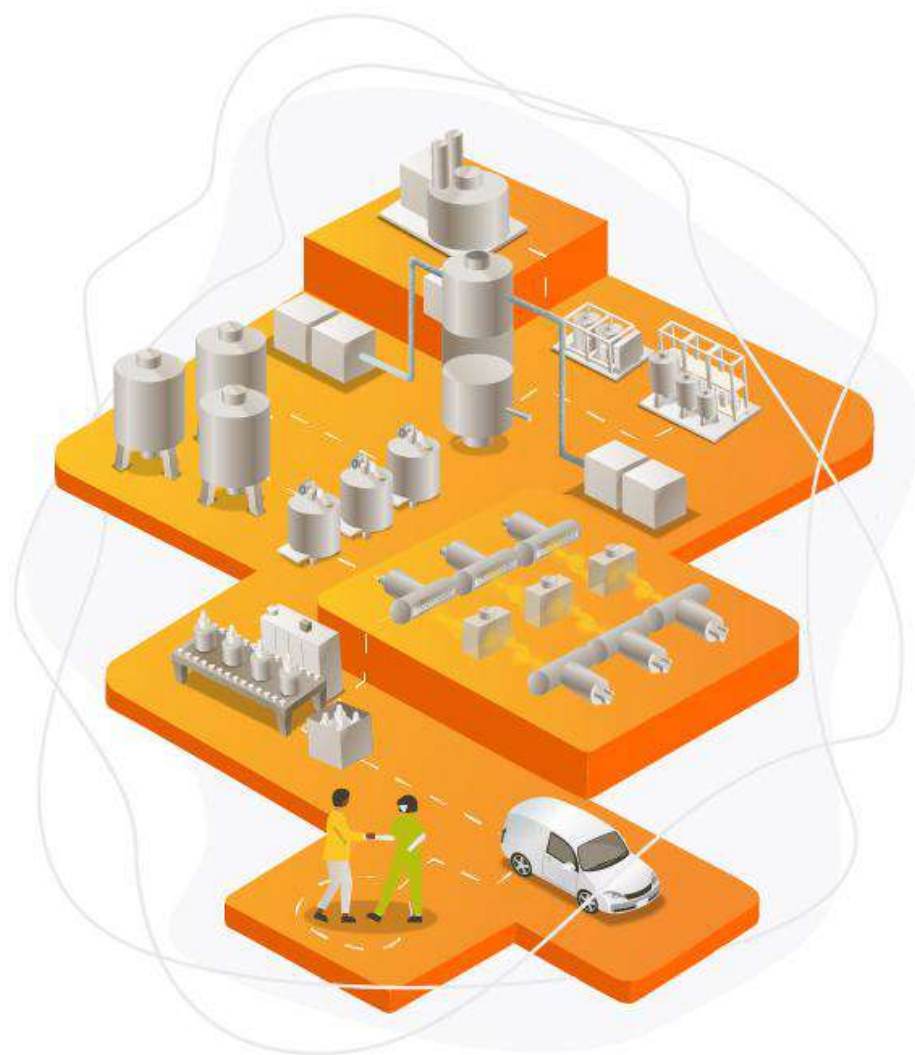
The **ALJET 1500 LH** and **ALJET 750 LH** models are available in natural gas version.

The **ALJET LH** burner complies with the safety standards thanks to the incorporation of an ignition pilot burner and a flame supervision cell.

Related Offers

The **ALJET LH** is a part of the **BoostAL™ for Ladle Heating** offer.

These are comprehensive offers that combine the best of our gases, application technologies and expertise support from Air Liquide.

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L'activité Industriel Marchand d'Air Liquide propose à ses clients des gaz et des solutions innovantes, intégrant des technologies d'application, des équipements et des services. De l'artisan indépendant aux grandes sociétés industrielles, nos 35 000 collaborateurs accompagnent au quotidien plus de 2 millions de clients dans 75 pays. Ils utilisent leurs incomparables capacités commerciales et techniques pour développer des solutions de gaz qui stimulent la performance de nos clients industriels et les aident à améliorer la qualité de leurs produits, contribuant ainsi à une plus grande compétitivité tout en minimisant l'empreinte environnementale de leurs activités.