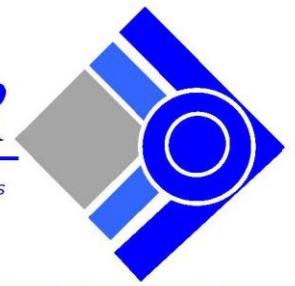


MANUFACTURING & SERVICE STANDARDS

L.LAIR
E T A B L I S S E M E N T S



INDUSTRIAL GAS BURNERS
INDUSTRIAL HEATING SYSTEMS MANUFACTURER

www.lair.com.fr

Indice 4 – 01 01 2019

Honeywell
Division combustion
Expert & Honeywell
combustion items stockist



SERFLAM & Gazflam Industrie are
Ets L.LAIR departments



Ets L.LAIR are **FRANCE**
SOLUTIONS PARTNER
SIEMENS CERTIFIED

○ **Basics Rules & EC Standards followed by L.LAIR for manufacturing any heating system:**

- ✓ France : AFNOR, AFG, DTU, Atex.
- ✓ Europe :
 - EN 746-2 Safety requirements for combustion and fuel handling systems on Industrial Thermoprocessing equipments.
 - EN 525 Safety requirements for human ambience gas heating equipments under 300 KW.
 - EN 298 Safety requirements for flame control and monitoring systems.
 - EN 292 Safety requirements for machines.
 - EN 60204-1 Safety of Machinery, Electric equipment of industrial machines.
 - 2014/68/UE (PED) Directive : Requirements for any works on gas pipes under pressure > 500 mb (only for a complete system and only on request by customer specific order).
 - EN ISO 12100 (P1 & P2) – ISO 7-1 – Welding according and following EN 287-1.
 - MAIN MACHINES DIRECTIVES : 98/37/EC – 89/336/EC – 73/23/EC – 2006/42/EC.

○ **Burners, Fuels trains, electrical panels :**

- Manufactured following L.LAIR standard (*L.LAIR most commonly used devices and items listed below, non-exhaustive list*).
- Pipe trains fully assembled following EC standards (see above).
- Non-welded leak joints assembled with LOCTITE 572 &/or 577.
- Tubing & threaded connections according NF & EN 746-2 standards.
- Electrical + leak tests under air pressure with required certificates.
- If needed and ordered by customer, mounting on a metal frame.
- Painting & stickers following EC standards. (Gas = RAL 1011 – Air = RAL 5012).
- Standard or "tailor made" combustion chambers.
- If needed or required by customer, special design to allow a flame inside
- Designed for optimum burner performance.
- Available in various materials and especially adapted to customers process.
- Designed to minimize the use of materials that contain crystalline silica.
- Control panel for safe ignition and control of industrial burners.
- Standard or custom designs to suit the application and comply with customer's needs.
- Flame Safeguard in compliance with EC standards and codes.
- High temperature limit and temperature controllers EC approved.
- With or without keyboard display module.
- If needed, weatherproof covering with options for hazardous duty service.
- Highly visible indication lights and easy-to-operate switches.
- Combustion air blower motor starters and options for every machine motors.
- If ordered by customer, the equipment will be installed on site according to most rigorous demands and following EC requirements.
- If ordered by customer, all fuels (gas & air) inlet and outlet (vent) tubing will be done with re used customer existing gas line.
- If ordered by customer, all electrical wiring installation will be done on site according to most rigorous demands and following EC requirements.
- Wiring cables NO5VV5F type for commands, cables HO7RNF for power supplied reinforced cables for temperature probe rods will be installed on site according to most rigorous demands and following EC requirements.
- If possible, according to items supplied, burner and the whole system will be function-tested with a pre start up in our workshop - bench test prior to delivery for quality assurance with required certificates.

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L.LAIR Sarl - ZA du TUBOEUF - 115 allée des ORMETEAUX - 77170 - Brie Comte Robert - **FRANCE**
☎ : 00 33 (0)1 64 05 88 59 ☎ : 00 33 (0)1 64 05 44 46 - www.lair.com.fr



○ **L.LAIR EQUIPMENTS STANDARDS** (main non-exhaustive list) :

- ✓ Burners: L.LAIR – Gazflam Industrie division *
- ✓ Isolating & safety gas manual valves : EFFEBI*
- ✓ Gas Filters: MADAS* - MAXITROL – MARCHEL.
- ✓ Pressure gauge : *specific designed for L.LAIR**
- ✓ Pressure gauge safety valve : *specific designed for L.LAIR**
- ✓ Flow meters : Elster – Instromet**
- ✓ Gas pressure reducer: MADAS*- Emmerson.
- ✓ Ratio air/gas & monitoring: MADAS* - DUNGS - SIEMENS*.
- ✓ Safety solenoid valves: SIEMENS* – Honeywell – MADAS*.
- ✓ Pressure safety switches: SIEMENS* – Honeywell* – FEMA*.
- ✓ Safety body valves: SIEMENS* – Honeywell.
- ✓ Actuators for safety valves: SIEMENS* – Honeywell.
- ✓ Regulating valves: SIEMENS* - Honeywell.
- ✓ Regulating motors: SIEMENS* – Honeywell.
- ✓ Leak tests systems: SIEMENS* – DUNGS – Honeywell.
- ✓ Ignition transformers : *specific designed for L.LAIR**
- ✓ High tension/ionization connectors : *specific designed for L.LAIR **
- ✓ Ionization/ignition wiring cable : *specific designed for L.LAIR **
- ✓ Spark igniters & flame rods : *specific designed for L.LAIR **
- ✓ Safeties, flame monitoring & control systems : SIEMENS* – Honeywell*
- ✓ Electrical equipment's**: Legrand – Telemecanique – Schneider.



*All items are available in L.LAIR storage except when out of stock or already sold.

** Items not available in L.LAIR storage, in order only.

○ **Items delivered on delivery or made available (for the material of our supply):**

* Data sheets & documents, copyrighted and protected, are supplied in only 1 ex. on @ & only in .pdf version.

- 1 Standard drawing of the system if the whole equipment is supplied by L.LAIR.
(Drawing base under AUTOCAD tools- 2D only).
- L.LAIR General Instructions.
- Burner technical data sheet with his start up procedure (if commissioning excluded by L.LAIR).
- Technical data sheet of burner equipment.
- Technical data sheet of every gas safety equipment.
- Technical data sheet of every safety electrical equipment.
- Technical data sheet of every temperature safety and controller(s).
- Document of maintenance routine and controls.
- Spare part list for 1st emergency and maintenance routine further 5 years.
- Electrical drawing set for control panel (*drawing base under AUTOCAD tools or under specific tools with automatic back up following French automotive industry under specifications in basics study & only in case of the whole electrical system is supplied by L.LAIR*).
- EC Conformity and incorporation certificates of any system supplied by L.LAIR.
- EC bench test Conformity and certificates of any work supplied by L.LAIR.
- Test and startup/commissioning certificate (*if done by L.LAIR itself*).

○ **Preliminary requirements for completion of on-site operations:**

- 230V/50Hz mains electricity and 6 b compressed air via industrial system on-site. A point of access should be as close as possible to the equipment requiring servicing.

○ **TRAINING:** Please note that our company is **Training Course Dispenser registered.**

Theory and practical training courses on the heating systems in our sector of activities or area of expertise, on-site training, customized training courses or training on our premises are available on request. A training agreement is available to enable you to claim potential funding. (*Please contact our administrative department for any requests*).

Our training team consists in L.LAIR employees & partners as SIEMENS that have a wide-range of experience with working on industrial combustion equipment all over the world to ensure that you take away new knowledge from your training event. Our instructors are well versed with the current codes and standards to keep you safe in your facilities and compliant with your insurers.

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For commissioning, it is **ESSENTIAL** that systems are started up under normal operating conditions; for this reason, customer staff with the necessary expertise to ensure the overall operation of the systems to be serviced **MUST** be present to ensure that commissioning, setting and testing operations run smoothly. In the event of an incident or if it is not possible to carry out the scheduled start-up, for a reason not linked to our service or supply, an additional charge shall be applied in respect of the initial order. Any last-minute cancellation due to the client's decision or operation postponed by the client shall incur the full charge if the service is cancelled less than 4 calendar days prior to the initially scheduled date.

We reserve all rights in respect of the mechanical and electrical condition of installed components outside our supply (main electrical control cabinet, control system, probes, fans, dampers, contacts, etc.). In the event of the need to replace or repair some components arising during the service, we shall request your prior approval and the parts and works shall be charged in addition to our initial quotation. Our qualified staff have extensive expertise in the area of heating systems and are capable of remedying any issues or anomalies observed during servicing and commissioning procedures.

Please note that, for obvious **SAFETY** reasons, the on-site presence of staff appointed or authorized by the client, is **MANDATORY** throughout the on-site servicing operations. Should it not be possible to obtain this presence necessary to ensure material and personal safety during the operation, we cannot be held liable for any incident or damage liable to be caused by this absence and we reserve the right to cancel the procedure on-site immediately and have it rescheduled if the client fails to comply with this clause. The costs incurred by the failure to comply with this basic safety regulation shall be borne by the client, in addition to our initial proposal.

We certify that our staff assigned to perform this work, employed by our company in accordance with regulations, are qualified and trained for all servicing operations on the products in our standard. Unless clearly and explicitly stipulated otherwise in a proposal, all services (procedures + travel) shall take place on weekdays from Monday to Friday during normal working hours from 8 am to 5 pm, excluding public holidays. (Weekend, night-time or public holiday services available, please contact us separately unless explicitly stipulated otherwise in the proposal).

Unless explicitly stipulated otherwise in a proposal, by convention, the prices given are net, exclusive of tax, indivisible, firm and not negotiable, EX WORKS from L.LAIR B.C.R 77- France, (plus any ancillary shipping, packaging, customs, bank charges, etc.), excluding materials and/or equipment supplied and fitted by us on the end client's site (see technical installation specifications in the proposal).

Technical and sales proposals are based on our general terms of sale, prepared without committing the client on the basis of the information in our possession at the time of design and subject to any subsequent technical modifications required for the project requested or amended by the client or incorrect information provided to us by the client, for which the client shall be liable.

Unless explicitly stipulated otherwise in a proposal, the standard lead time for the supply of equipment (excluding specific equipment) for shipment or installation is approximately 10 weeks following the receipt, in full and without amendments, of all the technical information required to manufacture the heating system. Lead times given as an indication are subject to change according to the work load and supplier lead times (e.g. annual closure).

Warranty: The warranty period extends for a period of 24 months from the date of provisional acceptance in factory L.LAIR by a duly authorized representative by the customer, or the provision of material for removal by the customer, or well on the date of delivery by us if the transport is at our expense, or the date of the end of the installation work if they are our service. Standard wear and maintenance parts as defined in the spare parts list and emergency list provided by our GSC components department are excluded.

Liability: L.LAIR undertakes, from the customer to remedy malfunctions resulting from a defect in the design, materials or manufacture, within the limits of the provisions of our general conditions of sales in appendix and available on <http://www.lair.com.fr/page/cgv.php>. The warranty claim must define precisely and in writing the malfunction involved. LAIR never guarantees the equipment that has not been maintained according to the rules of the art and according to its own specifications, which has been equipped with replacement parts not approved by him or that has been modified by the customer. The warranty is excluded for damages resulting from force majeure, negligence or lack of supervision of the customer, defective use, as well as for parts whose use, normally leads to rapid wear and tear a special mention on the spare parts list provided by L.LAIR's component department. As specified above, the warranty is 24 MONTHS from the date of commissioning, for equipment used under normal conditions and as indicated above.

Pursuant to the French law No. 80.335 dated 12 May 1980 and 25/01/1985 on ownership transfer, the equipment and/or components sold shall remain the full property of Ets L.LAIR until they have been paid for in full by the client. Should the system be considered to be definitively incorporated in the buyer's building, the retention of ownership shall be upheld and valid on removable equipment. In any case, Ets. L.LAIR shall retain any down payments as compensation in the event of the need to apply the present clause.

From the arrival of the equipment on the client's premises, the client shall be deemed liable for any damage caused to or by this tangible or intangible property, regardless of the reason.

Intellectual property: all designs, preliminary designs and all documents accompanying these services are protected by French legislation & agreements in respect of industrial property, copyright and unfair competition applicable to these services and documents.

Any reproduction or copying of this document in part or in whole regardless of the medium is prohibited without the written and initially approval by Ets L.LAIR Sarl; this document and all the accompanying items are protected by French legislation & agreements in respect of industrial property, copyright and unfair competition.

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ON SITE SERVICE TERMS

1. Service confirmation(s):

To be processed, all service requests, even those covered by warranty for a complete system supplied by us, should be confirmed by sending an order by post in due form for acceptance prior to the selected data and/or time. Under warranty, the client's order shall be costed at €1 min. and recorded as such by our administrative departments until the technician returns and the service form countersigned by the client or, failing this, by the client's authorized representative on-site, can be examined (see para. 3). In the event of an estimated procedure lasting for more than 2 days, including travel, a sum of €1500 shall be required as a down payment for the order with immediate payment of our pro-forma invoice on receipt.

Any last-minute cancellation due to the client's decision or operation postponed by the client shall incur the full charge following fixed price ordered or €1000 extra charge upon any real dispenses still engaged according to the on-site operation order, if the service is cancelled less than 4 calendar days prior to the initially scheduled date.

2. Service terms:

For obvious reasons in respect of safety, insurance cover and smooth running of the procedure, the client undertakes to provide us for the duration of the procedure with a member of staff with the necessary expertise to ensure the overall operation of the systems to be serviced and/or a translator as required for services outside mainland France.

3. Validity terms:

The client or, failing this, the client's authorized representative on-site, undertakes to countersign an authentic service form drawn up by our technician on-site at the end of the procedure. This form referenced on the basis of our project code shall include the type of service, the equipment undergoing servicing, the location of the equipment on the site, the name and number of technicians present on-site, the departure time from Ets L.LAIR, the arrival time on-site, the time spent on-site to complete the procedure (*for any work not covered by a flat rate*), the type of work carried out, the departure time from the site and any reports deemed to be important by our technician(s).

4. Terms of implementation:

To avoid wasting any time on-site, or extra travel due to a lack of preparation and thus unforeseeable extra charges prior to the service, at the time of final confirmation of the service date, the client shall undertake to ensure that the following items are dealt with:

- **Access :**

All measures should be taken to enable access to the equipment to be serviced under normal safety conditions (removal of debris, thermal insulation of any hot spots, mechanical protections, etc.), convenient, conventional and normal access (work platform, ladders, doors, safety loops, etc.).

- **Fuel :**

Sufficient quantity of fuel supplied at the correct pressure, to the manual shut-off valve in the gas fittings covered by our supply.

- **Connections :**

Other than the connections made on-site if the equipment is installed by us, all other connections not included in our service should be blanked and/or sealed. (Electricity, air/gas fittings, electrical boxes and cabinets, control systems, probes, etc.). Power supplies and correct utility (air, gas and electric) power protection at terminals.

- **Process :**

Connections and satisfactory operation of all fans not included in our service (direction of rotation, currents, flow rate, pressure, etc.). Satisfactory operation of setting devices such as flaps, dampers, sliding valves, splitters and all intrinsic control devices in these components. Clean filtration, in accordance with the modes and temperatures required by the process. Mains – equilibrated air flow & distribution.

- **In general :**

The equipment and/or machine on which the equipment, covered by our service, is installed or is to be incorporated, should be ready, in accordance with EC regulations, the applicable machine specifications and directives and entirely at our disposal throughout our service.

Under these very specific conditions, we can clearly and categorically guarantee the service quality that you expect from L. LAIR Company.

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