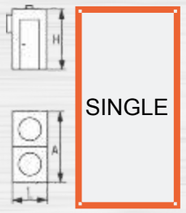
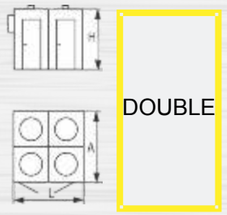
A LARGE CHOICE OF MODELS



SINGLE



DOUBLE

	Name	A: Overall overhang 1 door (mm/*ft*)	L: Width (mm/*ft*)	H: Overall height (mm/*ft*)	Heat power: E/EV (kg/*lb* steam/h)	Heat power: DGV (kg/*lb* steam/h)	Heat power: PFE steam (120°c) (kg/*lb* steam/h)	Heat power: PFE electrical (120°c) (kW)	Electrical power, excluding heat: E (kW)	Electrical power, excluding heat: EV/DGV/PFE (kW)
SINGLE	1 trolley	1.330 *4,36*	1.500 *4,92*	3.000 *9,84*	30 *66*	15 *33*	50 *110*	27	1	4
SINGLE	2 trolleys	2.430 *7,97*	1.500 *4,92*	3.200 *10,50*	60 *132*	25 *55*	100 *220*	54	1	7
SINGLE	3 trolleys	3.530 *11,58*	1.500 *4,92*	3.200 *10,50*	90 *198*	30 *66*	150 *331*	81	1	10
SINGLE	4 trolleys	4.630 *15,19*	1.500 *4,92*	3.200 *10,50*	120 *265*	40 *88*	200 *441*	108	1	13
SINGLE	5 trolleys	5.730 *18,80*	1.500 *4,92*	3.200 *10,499*	150 *331*	50 *110*	250 *551*	135	1	16
SINGLE	6 trolleys	6.830 *22,41*	1.500 *4,92*	3.500 *11,48*	180 *397*	60 *132*	300 *661*	162	1	19
SINGLE	7 trolleys	7.930 *26,02*	1.500 *4,92*	3.500 *11,48*	210 *463*	80 *176*	350 *772*	189	1	22
SINGLE	8 trolleys	9.030 *29,63*	1.500 *4,92*	3.500 *11,48*	240 *529*	90 *198*	400 *882*	216	1	25
SINGLE	10 trolleys	11.230 *36,84*	1.500 *4,92*	3.800 *12,47*	300 *661*	100 *220*	500 *1.102*	270	1	31
DOUBLE	1+1 trolleys	1.330 *4,36*	3.000 *9,84*	3.200 *9,84*	60 *132*	25 *55*	100 *220*	54	1	7
DOUBLE	2+2 trolleys	2.430 *7,97*	3.000 *9,84*	3.200 *9,84*	120 *265*	40 *88*	200 *441*	108	1	13
DOUBLE	3+3 trolleys	3.530 *11,58*	3.000 *9,84*	3.500 *11,48*	180 *397*	60 *132*	300 *661*	162	1	19
DOUBLE	4+4 trolleys	4.630 *15,19*	3.000 *9,84*	3.500 *11,48*	240 *529*	80 *198*	400 *882*	216	1	25
DOUBLE	5+5 trolleys	5.730 *18,80*	3.000 *9,84*	3.500 *11,48*	300 *661*	100 *220*	500 *1.102*	270	1	31

Whatever your requirements, we have the right cooker for your production

LUTETIA

TECHNOLOGIES & SOLUTIONS

COOKERS

DEFROSTING, COOKING, DRYING, SMOKING, CHILLING

PRECISION, PERFORMANCE & PROFIT

LUTETIA SAS
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60 128 Plailly- FRANCE
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Fax. +33 (0)344 607 001 info@lutetia.fr

MULTI-PURPOSE, ROBUST COOKERS FOR ALL OF YOUR APPLICATIONS

LUTETIA

GLOBAL LEADER SINCE 1965

Constructor of equipment for the food industry for over fifty years, LUTETIA develops injectors, mixers and defrosting, cooking, drying, smoking and chilling units, world leader in some of these technologies.

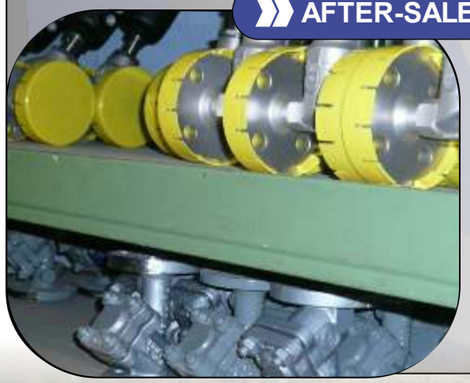
Every day, hundreds of manufacturers benefit from the excellent integration of our equipment in their manufacturing processes and an exceptional level of reliability.

INTERNATIONAL PRESENCE

LUTETIA accompanies the client in the development onsite in order to address its needs in terms of technological expertise and food processes. Over 10 000 systems have been installed worldwide to date for defrosting, salting, mixing, drying, cooking, chilling, steaming, smoking and packaging operations.

The LUTETIA laboratory and production centralisation are situated close to Paris, 10 minutes from Roissy Charles de Gaulle airport, allowing reactive logistics at the international level.

AFTER-SALES SERVICE



LUTETIA keeps a significant stock of spare parts. When resuired, the parts are sent within s short deadline thanks to high-performing logistics.

It is this kind of organisation that helps maintain your productivity in all circumstances.

DESIGN OFFICE - A CENTRE OF EXCELLENCE

With a team of experienced engineers specialising in design and development, LUTETIA maintains its position as worldwide leader.These engineers fully understand the requirements of agri-food industrialists and design around the main concerns of:

- Security and food safety
- Integration of cookers into production
- Optimisation of production methods
- Continuous improvement
- Development of new equipment

PROCESSING TECHNOLOGY AT YOUR SERVICE

The laboratory, main tool in the technology department at LUTETIA, contains all of our most recent equipment and procedures, equipped with the latest technological advances. Through its understanding of the meat profession, the laboratory's team of food scientists and technicians can offer you the best solutions for the profitiability of your tool and the optimisation of the quality of your products. The most common themes are:

- Process development
- Machine and process validation for customers
- Optimisation of manufacture
- Innovative technology
- Resolution of industrial problems

TECHNOLOGY: LEADERSHIP THROUGH INNOVATION

LUTETIA constantly develops and patents new equipment and procedures whose quality is recognised worldwide:

- 1976: Vacuum massaging
- 1977: Meat tenderising
- 1992: Dynamic steam-vacuum defrosting in massager
- 1999: PROactivation in massager
- 2001: Smoking in massager
- 2003: Tenderising in massager
- 2010: Vacuum cooling in massager
- 2012: Drying in massager
- 2014: Rapid defrosting in thawing chamber (DTGV)
- 2015: Defrosting in massager with controlled yield

DGV
DEFROSTING CHAMBER
Fragile products

PFE
UNIVERSAL COOKERS
Smoking bellies, sausages, roasting

E /EV
WET COOKING OVEN
Cooked meals, hams

REF
COOLING UNIT
Cooked products

DRY COOKING AND WET COOKING

LUTETIA

TECHNICAL PRINCIPLE

COOKING: dry and wet

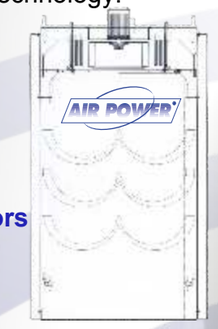
Strong ventilation ensures perfect exchanges; speed of processing, uniform temperatures, quality of finished products, whatever the type of cooking (dry, humid, mixed)

VENTILATION POWER / UNIFORMITY

System performances progress drying, smoking and cooking technology.

ENERGY SOLUTIONS TAILORED TO YOUR POSSIBILITIES AND YOUR APPLICATIONS

- Integrated thermal exchangers (Steam or electric)
- Expanded steam (LUTETIA network or generators)




Steam manifold


Steam circuit


Resistances

Steam generators

- 18 kW
- 24 kW
- 36 kW


Turbine


Ambiant probe


Core probe

Other accessories

- Trolleys,
- Smoking stick
- Trays, stainless steel grills,

TECHNOLOGY AND PRODUCTS

Cooking gives specific sensory properties to a product, in terms of appearance, texture (tenderness, succulence, cohesion, etc.), flavour and nutritional properties. It also allows numerous enzyme reactions to be inactivated and reduces the microbiological content of the products.

The system is based on the circulation of coolant fluid in a temperature-controlled cooker.

WET COOKING: injection bars diffuse low pressure steam directly into the cooker, with a heightened exchange coefficient in the product/steam interface. Steam provides latent condensation heat to the product.

DRY COOKING (UP TO 180°C DEPENDING ON CONFIGURATIONS): a tubular exchanger (or a range of resistances) in the vault produces dry heated air. The exchange coefficient at the product/dry air interface is lower.

VACUUM COOKING consists of cooking a previously vacuum packed product at a relatively low temperature. The product is pasteurised in its final packaging and its cooking performance is optimised.

ADVANTAGES

Profit

Cost-effective, improved yield by controlling temperature, humidity and the versatility of the system,

Fast, convection and diffusion mechanisms accelerated through optimisation of aeraulics,

Performance

Conceived for you as it is tailored precisely for your factory, the system being modular and adaptable depending on your constraints and your configuration,

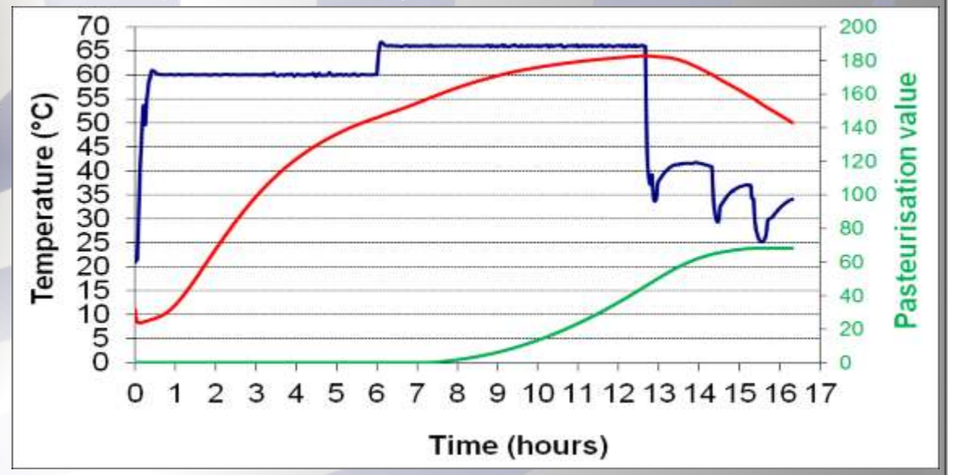
Versatile, as efficient in dry and humid cooking and in all situations in between. The cookers can be used for defrosting, smoking, chilling, etc.

Precision

Safe and hygienic, reduced risk of cross-contamination, simplified quarantining of batches. Uniformity of processing and precise control of parameters reduce risks of non-compliance. Control and monitoring of pasteurisation,

Uniform, thanks to optimised aeraulics,

Regular, from one cycle to another, through the control of ventilation, temperature and humidity and the control-command of the process.



E /EV
WET COOKING OVEN
Cooked meals, hams, etc.

PFE
UNIVERSAL COOKER
Cooking pâté, roasting, etc.

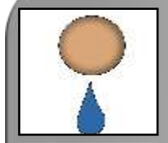
A RESPONSE FOR EACH PROFESSION

Cured meats, cooked and dried meats, cooked meals, seafood, fruit and vegetable transformations, cheese industry.

Ask your specialist LUTETIA adviser

HEATING, DRYING AND SMOKING

TECHNICAL PRINCIPLE

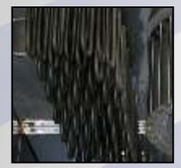


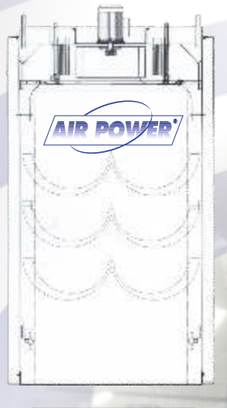
HEATING/DRYING: fast and uniform
High-power ventilation allows surface drying of products and quickly removes damp air.

SMOKING: hot and cold
Optimum drying and tailored ventilation accelerate smoke penetration to obtain products adapted to client's tastes. Humidity is continuously controlled. Four types of generators are available.


Steam circuit


Steam manifold


Resistances




Pneumatic circuits


Valves


Turbine


Ambiant probe


Core probe


Baffles


Hygrometer

TECHNOLOGY AND PRODUCTS

A moderate **HEATING** without cooking enables biochemical mechanisms to be accelerated such as browning and developing bacterial starters. It is carried out at temperatures lower than the coagulation temperature for proteins (around 55 °C).

DRYING enables food to be dried by extracting surface humidity by air whose temperature, aeraulics and humidity are managed.

SMOKING carries out transfers of matter between solid and smoked food, multiphased mixing. It gives products:

- A specific colour,
- A specific flavour
- Improved preservation.

PFE
UNIVERSAL COOKER
Smoking bellies, sausages…

ADVANTAGES

Profit / Performance / Precision

- **Cost-effective**, improved yield by controlling temperature, humidity and the versatility of the system,
- **Fast**, convection and distribution mechanisms accelerated due to optimisation of aeraulics,
- **Conceived for you** as it is tailored precisely for your factory, the system being modular and adaptable depending on your constraints and your configuration,
- **Versatile**, for all kinds of products, cooked or not, the cooker also being compatible with all smoke generator,
- **Safe and hygienic**, reduced risk of cross-contamination, simplified quarantining of batches. Uniformity of processing and precise control of parameters reduce risks of non-compliance,
- **Uniform**, thanks to optimised aeraulics,
- **Regular**, from one cycle to another, through the control of ventilation, temperature and humidity and the control-command of the process.

LUTETIA SMOKE GENERATORS


Sawdust generator
Still the traditional and versatile smoking method.


Woodchip generator
With or without recycling, for dense smoke and fast, intense smoking.


Log generator
Suitable for all kinds of smoking, operating in recycling, it carries out intense hot and cold smoking. Smoking begins as soon as it is started and produces cold smoke.


Liquid smoke generator
The solution to smoke toxicity, fire safety, cleaning and environmental problems.

LUTETIA LIQUID SMOKE

- A wide range of water-soluble smokes covering all of your application and adapted to all of your equipment.
- Smoke created and produced using a *HACCP* system (reduction of HAPs and, specifically, benzo(a)pyrene) and with a *4S* approach.

Satisfaction · Safety · Security · Service

FAST DEFROSTING IN COLD CONVECTION

LUTETIA PATENT n° 14/56533

LUTETIA

TECHNICAL PRINCIPLE

Fast DEFROSTING in cold convection

Combining strong ventilation and humid supersaturation, LUTETIA cookers allow more rapid defrosting, guaranteeing the quality and safety of finished products.

BREVETE LUTETIA PATENTED

Core and surface probes

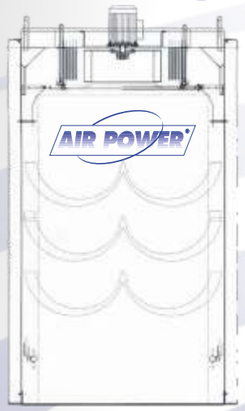
Water misting nozzle

Air - glycol tubular exchanger

Steam manifold

Steam circuit

Turbine



TECHNOLOGY AND PRODUCTS

Defrosting in a chamber allows less-limited transfer conditions between the surface of the product and the wet air by:

- High speed circulation of air supersaturated with humidity,
- Maintains a humid environment and a humid surface by steam and water misting which reduces drying and encourages heat transfer at the interface (action on coefficient h),
- Regulated heat supply (air, water, steam),
- Regulated cold supply (air, water).

} Action on ΔT

The aim is to balance the internal distribution of heat in the product and surface transfer between supersaturated humid air and the product so as to control the heating of the surface while providing the optimum quantity of heat.

Planck's Law

$$t = \frac{e.\rho.L}{\Delta T}\left(\frac{e}{8\lambda} + \frac{1}{2h}\right)$$

- **t :** Time require to defrost product(s)
- **e :** Product thickness (m)
- **ρ :** Density (kg.m^{-3})
- **L :** Latent heat of water fusion (L = 330 000 J.kg^{-1})
- **ΔT :** Difference between the freezing temperature of the product and the ambiant temperature (°C)
- **h :** Coefficient of heat transfer product/fluid (W.m^{-2}.K^{-1})
- **λ :** Product heat conductivity (W.m^{-1}.K^{-1})

ΔT maximum
Depending on surface temperature tolerance

Supersaturated air
Water mist Steam

Coolant fluid	h (W.m^{-2}.K^{-1})
Air in natural convection	5 à 25
Air in forced convection	20 à 300
Water in forced convection	300 à 6 000
Boiling water	3 000 à 60 000
Water steam in condensation	6 000 à 120 000

DGV
DEFROSTING CHAMBER
Fragile products

ADVANTAGES

3P TECHNOLOGIES & SOLUTIONS PRECISION PERFORMANCE PROFIT

Profit

Cost-effective, improved yield (product surface maintained humid), the equipment can be amortised in under one year,

Low water consumption, consumption being under 10 % of processed weight,

Fast, convection and distribution mechanisms accelerated for defrosting times 2 to 4 times shorter,

Performance

Respects the integrity of fragile products, products which remain static during defrosting (possible in bags or pouches),

Conceived for you as it is tailored precisely for your factory, the system being modular and adaptable depending on your constraints and your configuration,

Versatile, for all products and packaging,

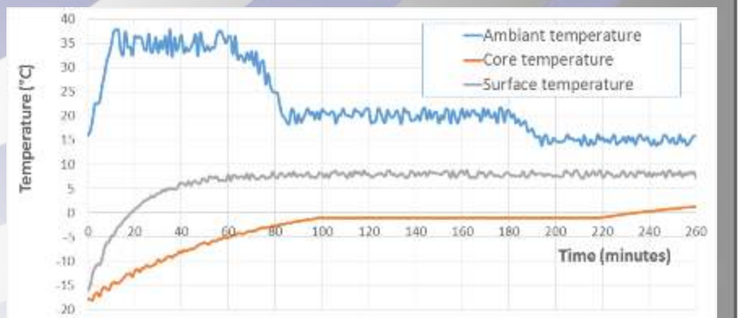
Innovative and patented, patent n° 14/56533,

Precision

Safe and hygienic, reduced risk of cross contamination, simpler quarantining of batches, short defrosting times incompatible with bacterial growth which stay in their latent phase, dual temperature control at the core and on the surface (tailored surfaced conditions),

Uniform, thanks to optimised aeraulics,

Regular, from one cycle to another, through the control of ventilation, temperature and humidity and the control-command of the process.



FOR 50 ANS LUTETIA

has been assisting manufacturing managers

- **Provides high-performing solutions for each manufacture**
- **Simplifies implementation: assistance, simple equipment, etc.**
- **Worldwide**

Fast after-sales service at your premises

CHILLING

CHILLING

RAPID CHILLING UNITS

- Capacity 1, 2, 3, 4 and 6 trolleys
- Pre-chilling by drenching (option)
- Chilling by stainless steel exchanger with glycolated

Ventilation:

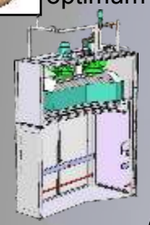
- 1 ventilator Ø 630 (stainless steel),
- Driven by 5.5 kW motor per trolley.

Cold:

- 1 stainless steel battery tube, stainless steel fins 20 kW per trolley,
- Battery powered by glycolated water (factory network) with "set" of regulators supply by ourselves, positioned either in the high part or on the cooker panel.

DRENCHING: as well as space savings, integrated drenching by water spray guarantees you controlled and fast pre-chilling.

FAST CHILLING: high powered ventilation and a system of glycolated water heat exchangers, quickly chill cooked or smoked products, for optimum health safety.



TYPE	DIMENSIONS Length × width	Height	DOOR OPENING	COLD	ELECTRICAL POWER
REF 1	1690 × 1500	Without "panoplie" glycolated water: 3985 mm	*Allow 1300 mm each side of the oven for door opening*	20 kW	8 kW
REF 2	3050 × 1500			40 kW	13 kW
REF 3	3730 × 1500			60 kW	20 kW
REF 4	5560 × 1500	With "panoplie" glycolated water: 4750 mm		80 kW	25 kW
REF 6	7530 × 1500			120 kW	35 kW

THE LUTETIA COOKERS PLUS

PRODUCT SAFETY: in case of failure of control regulator, a second independent system automatically takes over.

SPACE-SAVING: compact and modular cookers adaptable to the installation area and your manufacturing volumes, which allow suitable and upgradeable installations.

HYGIENE AND CLEANING: our cookers respect, and sometimes exceed, current health and safety standards in Europe and the USA.

RELIABILITY AND STURDINESS: the combination of the AIR POWER system, autopilot and reliable components, guarantees you low-maintenance equipment and consistent quality.

SPECIFICATIONS AND TRACEABILITY: all elements of manufacture are subject to detailed specifications and traceability when they are in contact with food, in compliance with Regulation (EC) n° 1935/2004.

OPERATOR SAFETY: all equipment manufactured by LUTETIA complies with the Machines Directive 2006/42/CE.

LUTETIA

REF
COOLING UNIT
Cooked products

TECHNOLOGY, *DESIGN* & ENGINEERING

AUTOMATION

☑ **CENTRALISED INFORMATION WITH COMMANDS AND CONTROL**

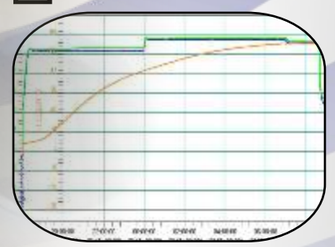
☑ **AUTOMATICALLY PILOTED WITH INTEGRATED COMMAND KEYBOARD OR REMOTE TACTILE SCREEN**

CONTROL AND PROGRAMMING OPERATIONS

- Functions (ventilation, valves, etc.)
- Creation of operations from functions
- Construction of programmes from the operations
- Definition of start/end/regulation criteria
- Creation of loops and cycles
- Duration of cycles
- Values of ambient core and surface temperatures
- Relative humidity values
- Calculation of pasteurisation value
- Regulation of ΔT
- Data registration (disk, card, PC memory)

SUPERVISION AND TRACEABILITY

☑ **VISUALISATION OF MANUFACTURING PROCEDURE IN REAL TIME**



Control can be linked to a LUTETIA supervision system or to your own global system.

☑ **OPTIMISED TRACEABILITY**

- History,
- Batch management,
- Production monitoring.

ASSEMBLY ADVICE

- Ground slope should be 5 mm /metre (descending towards the gutter),
- Facade: available passage; L 1170 mm, H 2125 mm,
- Standard trolley dimensions: 1000 mm x 1000 mm x 2050 mm
- Useable interior lengths: A - 270 mm

EVEN MORE REASONS TO CHOOSE LUTETIA

- **Guarantee the quality of your products**
- **Improve your profitability**
- **Benefit from great reliability**