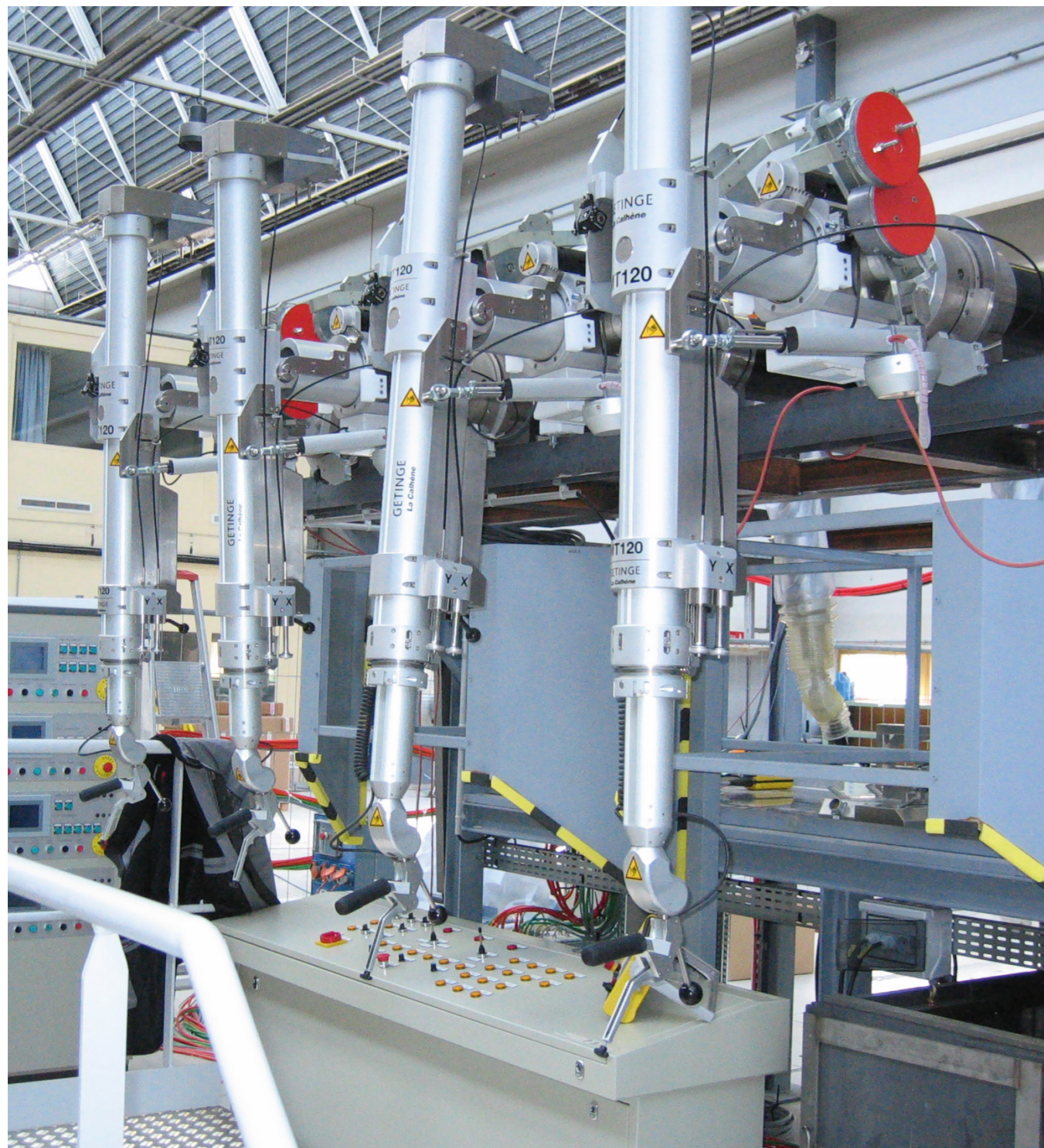


Equipment and
Solutions dedicated
to Nuclear Energy



Your partner for nuclear energy systems

The development of nuclear energy and related industries has led to technical innovations that contribute to user and environmental safety. Work on radioactive products and contaminants involves containing contamination and protecting against radiation exposure. These constraints have highlighted the need for solutions for working inside enclosures (manipulation and remote manipulation) and inserting and removing materials and/or waste (transfer) without breaking containment.

For over 60 years, LaCalhene has worked with the nuclear industry to develop and provide innovative and appropriate solutions for work, transport and transfer in hostile environments. Closely linked to the CEA (French Atomic Energy and Alternative Energies Commission) at the outset and for many years, LaCalhene developed and extended its expertise in other industry sectors.

Continuous service and technical support

Our core business is **ensuring operator safety and efficient operation**. All our actions contribute to better customer relations. We strive to improve our products and services by listening to our clients (feedback), respecting the regulations and standards of the nuclear industry as they evolve, and maintaining quality management standards.

Installation, use and qualification

Before delivery, our experts carefully study and develop installation plans and constraints, and each product is inspected according to an approved quality standard.

Training courses from LaCalhene

Training is tailored to customers' requirements, providing courses to get the best out of our products: use, maintenance and also recycling sessions.

Innovation for the futur

LaCalhene is investing in research and development to meet safety constraints that will be increasingly important in years to come (e.g. anti-seismic standards), international transport regulations) and to prepare the products of the future.



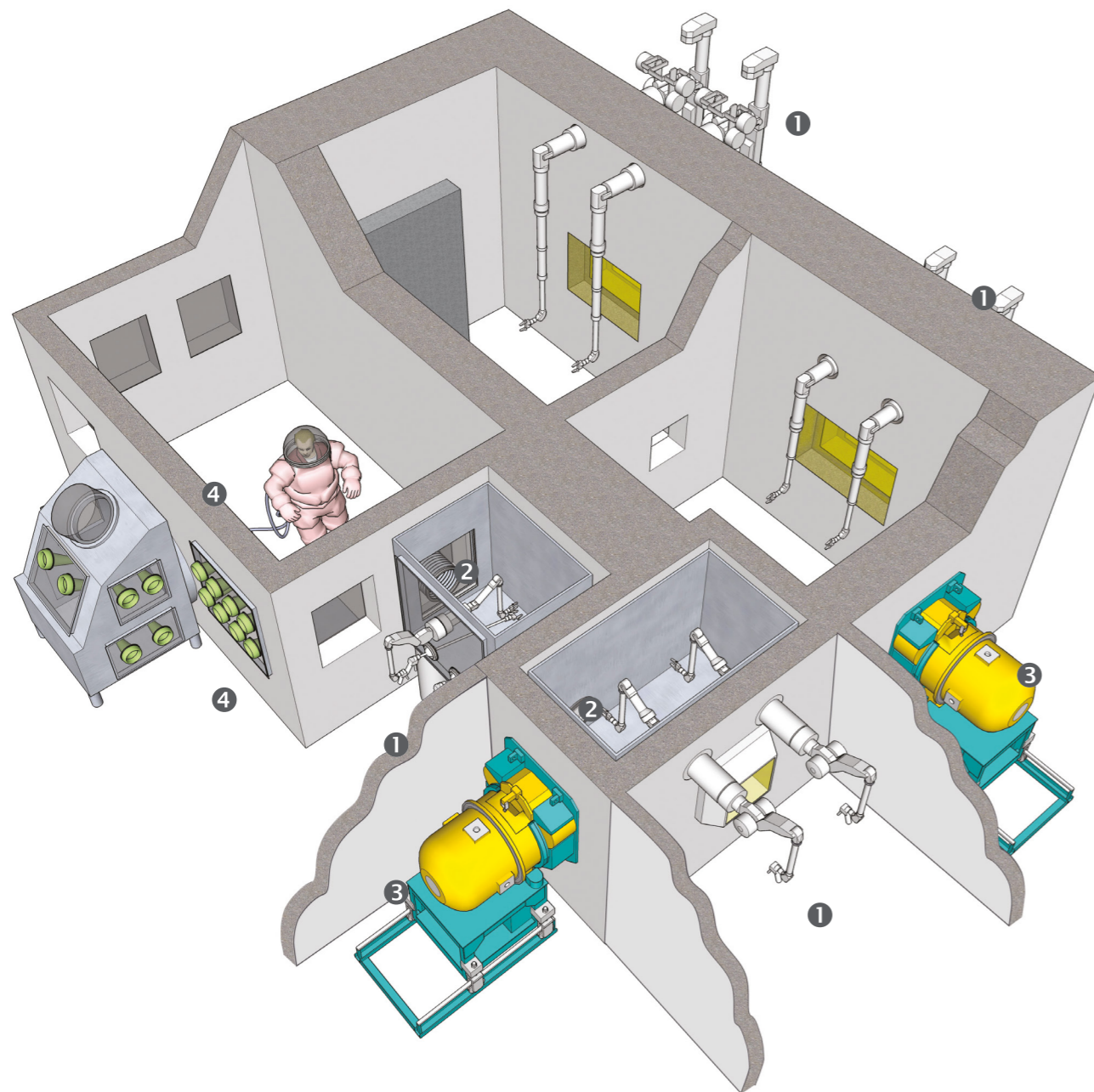
ORANO La Hague, France: over 600 remote manipulators installed.

Safe working inside a hot cell

A containment enclosure (hot cell, glove box), whatever its use or size, must feature adequate equipment for work without exposing staff to contamination or radiation.

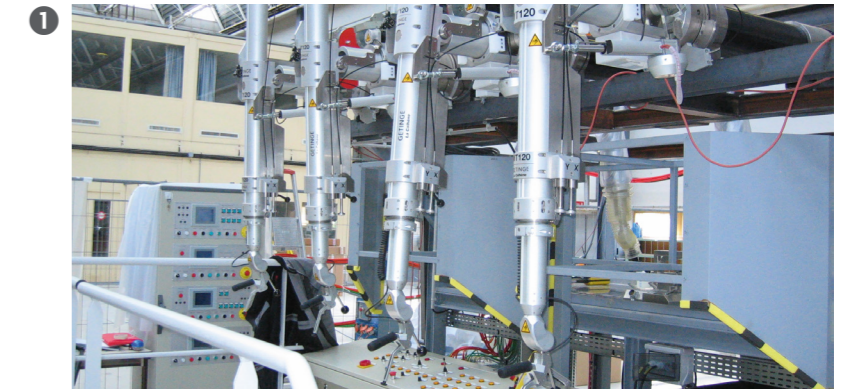
LaCalhene offers a wide range of products and services for efficient operations in a contaminated, radioactive environment.

Expertly designed for reliable performance coupled with experience-based innovation, our equipment combines high operational performance, safety, resistance and security, both for people and for the environment.



Remote Manipulation

A complete range of remote manipulators adapted to various cell sizes and a wide range of load capacity.

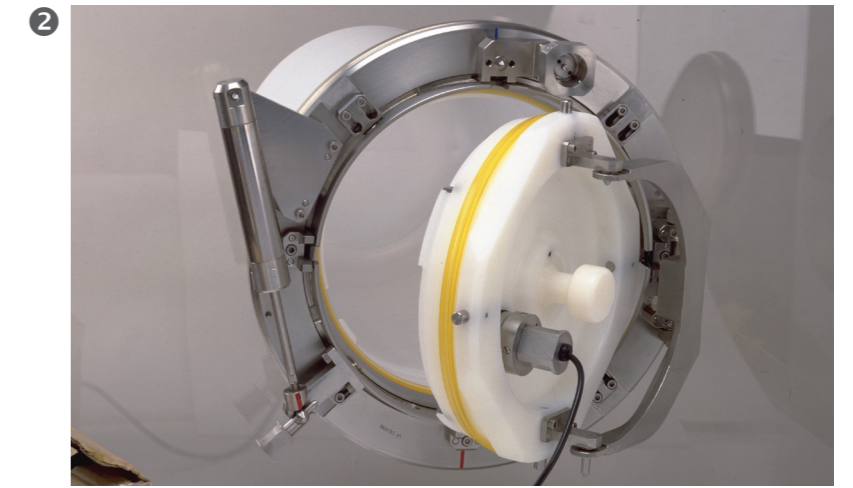


MT 120 remote manipulators



Transfer

We propose a wide variety of DPTE® solutions for transferring radio-active products in a hot cell or glove box.



DPTE® System



Transport

Combining the DPTE® technology with shielding, our transfer and transport casks meet international regulatory requirements while providing straightforward ergonomics that is safe and efficient.



PADIRAC Cask

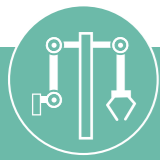


Handling

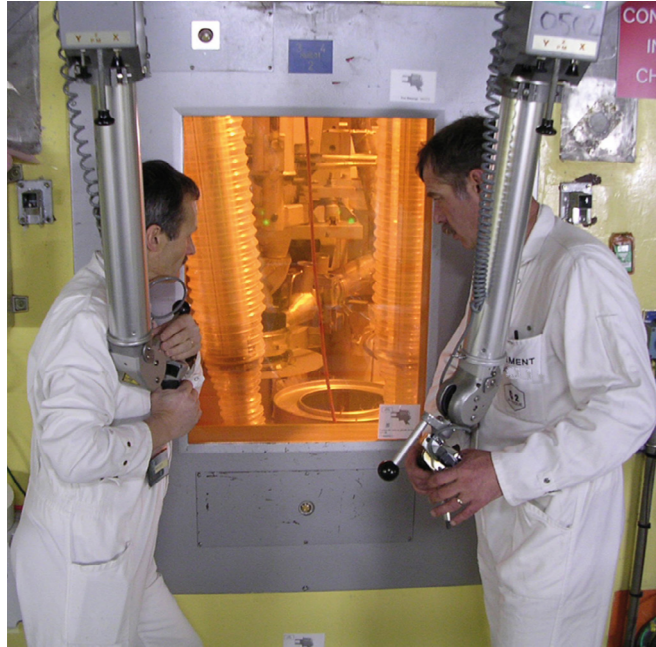
Safe equipment for working inside glove boxes.



AD gloves mounted on ejectable rings



Remote Manipulation



Safe working inside a hot cell.

LaCalhene offers a **comprehensive range of remote manipulators for the nuclear industry**, ranging from the MA 30, a simple, dexterous, small capacity model (3 daN), to the MT 200, a large capacity (20 daN) telescopic arm. Between these two products the MA 11-80 and MT 120 offer capacities of 7 and 12 daN.

MT 200 TAO Computer Assisted Remote Manipulation

In partnership with CEA et Orano, LaCalhene has designed a new generation manipulator with robotic function, which is piloted by computer and electrically assisted. The electrical master arm and motion module, combined with cutting edge software, improve productivity, ergonomics and operator comfort.

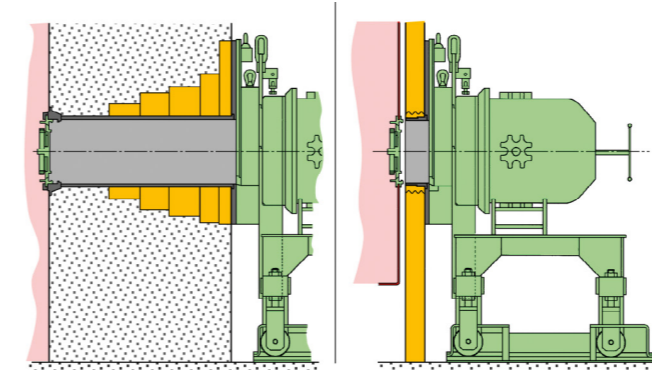


Transport

Moving highly contaminating and radioactive materials inside a site or on public roads.

PADIRAC⁽¹⁾ shielded casks are the straightforward, reliable solution provided by LaCalhene combining shielded docking with the DPTE[®] system. This assembly is used to move radioactive contaminating materials.

A **shock-resistant, fire-resistant transportation shell** is used to ship PADIRAC and AGNES shielded casks on public roads. This shell, in conformity with IAEA international transport regulations, eliminates the risk of radioactivity and contamination after accidental situations (standard test includes a nine-meter drop and a 800°C fire lasting 30 minutes).



(1) Permet d'Absorber des Déchets Irradiants et Contaminés



Transfer

Transferring products in complete safety.

Our transfer systems use DPTE[®] technology (Double Porte de Transfert Etanche - double door for leaktight transfer) for fast, safe, reliable transfers.

The DPTE[®] system is based on the interaction of two separate units – the Alpha part and the Beta part – each with a door and two closing and sealing functions. The fixed Alpha part is mounted on the containment wall while the Beta part can adapt to any type of mobile equipment (container, bag, cask, tunnel, etc.)

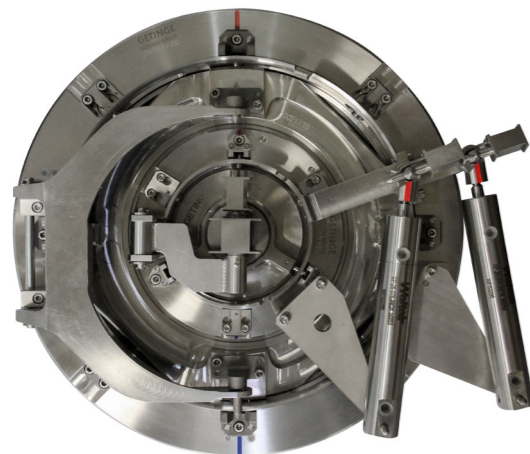


Handling

Effective protection when working inside a contaminated enclosure.

Our protective solutions, the J2L or AD gloves on ejectable rings are adapted to operating constraints in terms of dimensions and applications. LaCalhene products make glove change-overs quick, safe and ergonomic thanks to the use of ejecting devices which maintain leaktightness.

A wide range of accessories is available. Depending on requirements, ports can be equipped with gloves, windows, stoppers, bags and thru-tubes.



DPTE[®]



CEFE





Getinge La Calhène
1 rue du Comté de Donegal
F-41102 Vendôme cedex, France
Tél: +33 (0) 254 734 747
marketing-contact.glc@getinge.com
www.lacalhene.com

LaCalhene is an equipment manufacturer specialized in material to protect human beings in a hostile environment, protect a product against the surrounding environment, and protect the environment from hazardous products. Its customer base is half in the nuclear field and half in the pharmaceutical field.

In the nuclear sector LaCalhene supplies 4 product lines: remote manipulators, transfer systems (the DPTE® range, standard and special applications), Glove Box ports, and shielded casks for transfer / transport. LaCalhene supplies to 5 market segments: nuclear fuel manufacture, spent fuel recycling, radiopharmacy, laboratory / universities / units of research, and dismantling / decommissioning / sanitization.

On the basis of its long experience in the nuclear sector, Getinge La Calhène developed a set of solutions and equipment for the pharmaceutical industry, in particular for isolators and sterile transfer systems (DPTE® and DPTE-BetaBag®).

LaCalhene is an active member of:

