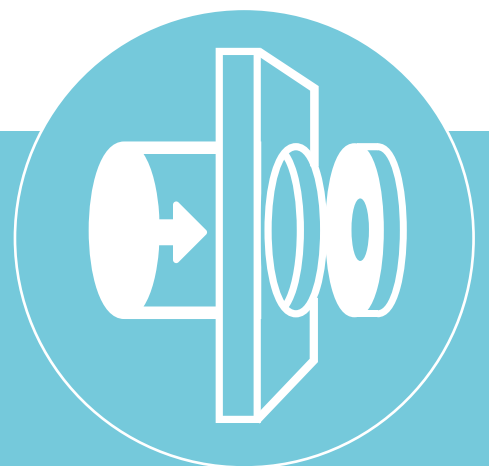


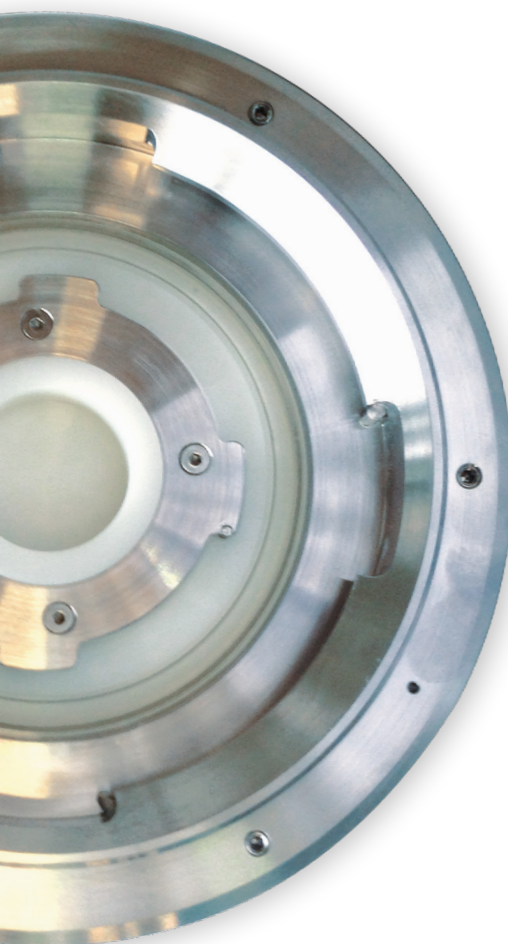


DPTE[®]
Transfer System

Transfer materials without
breaking containment



The DPTE® transfer system: Secure connection between two volumes



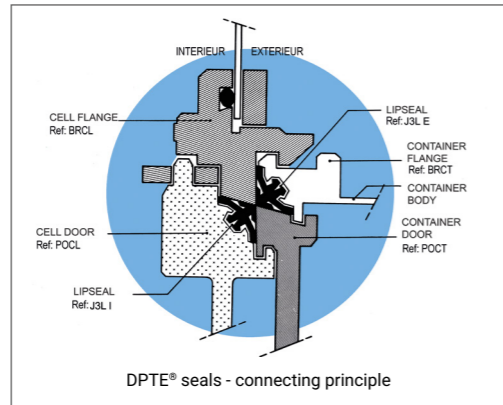
La Calhène, the creator of the DPTE® transfer system

In 1963, La Calhène developed the first DPTE® «Double Door for Leaktight Transfer (Double Porte de Transfert Etanche)» transfer system. Continuously improved and used for multiple applications, the DPTE® is the market reference.

With more than 30 000 systems in use around the world, the DPTE® is the industry standard for transfers requiring containment. Our engineering office can design specific solutions for your project.

The DPTE® system: an ingenious operating principle

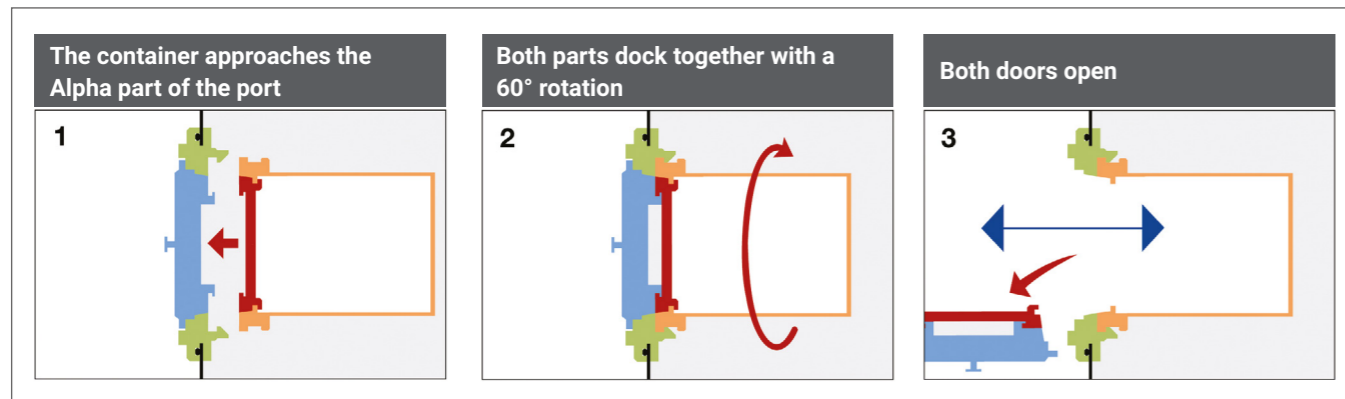
First and foremost a method to p f two complementary units, the « Alpha » and the « Beta », with mechanical safety locks and opposing seals.



DPTE® 270 on steel container - example of use

Functioning Principle:

The Alpha and Beta parts join together to form a single unit when they are connected by a 60 degree rotation. At the same time, both doors are detached from their respective flanges and fixed together, while the seals continue to maintain leaktightness of the new connected assembly.



● Alpha ● Beta

DPTE®, double door for leaktight transfer: Security and Reliability

The DPTE® design is perfectly adapted to the nuclear environment:

- Containment maintained at all times.
- Unlimited lifetime for the fixed parts (not including seals which can be replaced without breaking containment).
- Maintenance operations only on removable parts (by remote manipulators or gloves, depending on the type of cell).

A wide range adapted to many requirements:

- **Size***: 105, 190, 270 and 350 mm diameter.
- **Material**: Cell door is stainless steel or polyethylene. Cell flange is stainless steel.
- **Grip system**: gripping ball (manual opening), gripping square (for remote manipulator opening), or gripping device (for remote manipulator opening).

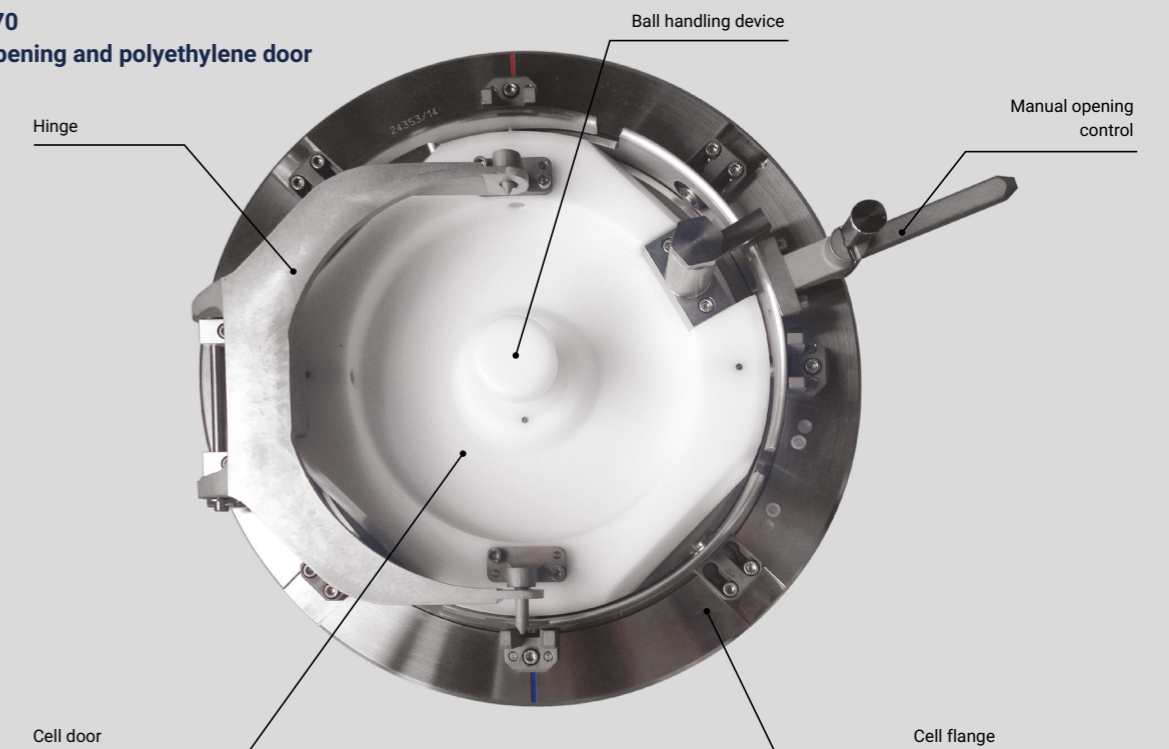
* Contact us for non-standard sizes.

• Locking / unlocking system:

manual or automatic (pneumatic actuator or electric).



DPTE® 270 hinged opening and polyethylene door



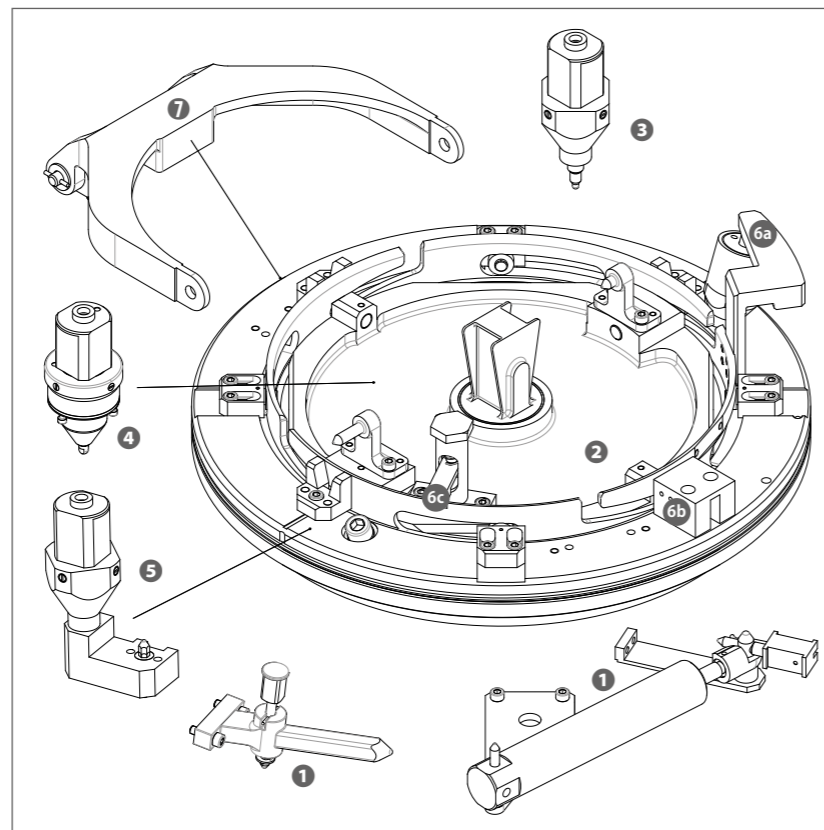
Accessories: a wide range for all applications

DPTE® port parts:

- ❶ Locking/Unlocking: manual, pneumatic or electric.
- ❷ Cell door equipped with gripping ball or manipulator arm handling device (stainless steel or polyethylene).
- ❸ Container locking detector.
- ❹ Container presence detector.
- ❺ Cell door closure detector.

Mechanical security devices (locking).

- ❻ Container flange locking.
- ❼ Interlock - cell door open.
- ❽ Interlock - container door present.
- ❼ Hinge.



Container accessories:



Container for restricted re-use*
(mainly used for waste)
polyethylene:
available in 105, 270
and 350 sizes.



Reusable Container*
stainless steel:
available in
105, 190, 270
and 350 sizes.



Reusable 105 Container*
made of transparent
PVC with stainless
steel container
flange.

* Length can be adapted

Accessories for mobile equipment:



Locking Key
sizes 270 and 350.



**Lid for protection
and handling**

Connection Tunnel

The connection tunnel is used for leaktight transfer between two contained volumes. The stainless steel tunnel is equipped with a container type connection integrating a metal bellows connected to a DPTE® port.



DPTE-BetaBag® NUC 270

Le DPTE-BetaBag® NUC has two main applications : insertion/extraction of materials in glove boxes, and waste removal

This flexible bag is a solution for safe, fast contamination-free transfer in/out of a glove box. The DPTE-BetaBag® 270 PU 95L NS NUC is a large polyurethane bag adapted to a DPTE® cell door, diameter 270.

The DPTE-BetaBag® NUC can be reconnected to different ports without risk up to 5 times.

Flexibility and optimization of waste storage volumes.
the bag can be welded by a standard triple welding machine allowing flexibility and optimization of waste storage volumes.



The DPTE® double door system with rotating flange

Thanks to the rotating flange of the DPTE® double door system, this flange rotates instead of the drum. When the flange moves round it connects the DPTE® double door to the PE liner.

The system is available in two diameters:

270 mm :

- Available in electric or manual version
- Connection to a 120 litre container

460 mm :

- Available in electric version
- Connection to a 200 litre container (standard oil barrel)

The DPTE® DrumLiner : a secure, fast, economical solution for transferring, packaging and storing nuclear waste products.

The DPTE® DrumLiner consists of a standard drum with a DPTE® container housed inside.

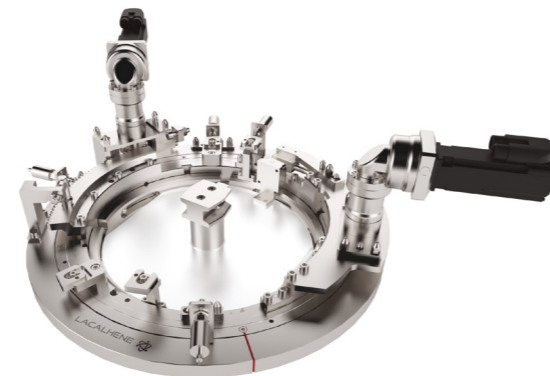
Advantages :

- Multiple connections / disconnections.
- Safe transfer without loss of containment.
- Filling ratio is optimized.
- Cost effective.

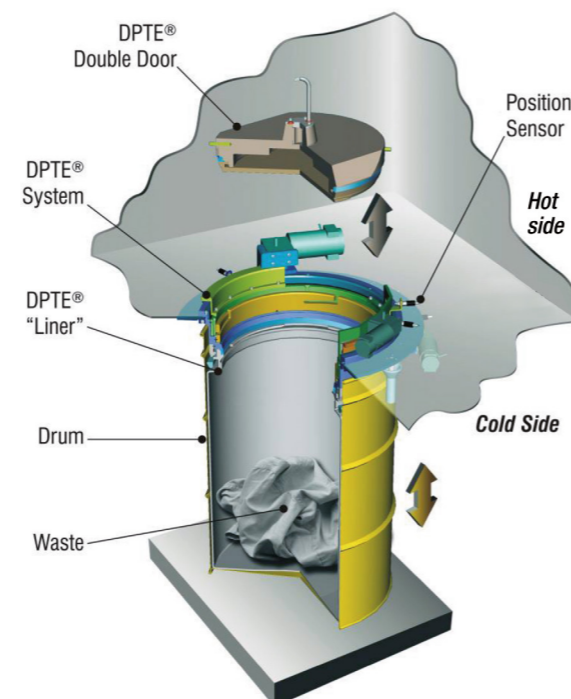
The DPTE® DrumLiner which can be re-opened without risk, offers a safe storage solution for nuclear sites.

Based on the DPTE® system, it consists of:

- Locking system : automatic or manual (270).
- A stainless steel cell flange 270 or 460.
- A polyethylene or stainless steel cell door.
- An anti-rotation switch for transport and a drum positioning device.
- A security switch to prevent disconnection of the drum-liner if the double door is not completely closed.
- A security switch to prevent the cell door opening when a liner and liner door are not present.



DPTE® system with electric rotating flange



The CEFE System: a solution for large volume, wide diameter transfer applications

The CEFE system provides protection against contamination. It is mainly used for dismantling. Safe and without rotation risk, it can be serviced from inside the cell. Maximized loading rates can be achieved in this robust, large drum by waste compaction.

The CEFE system is based on the general DPTE® system concept:

- Maintains containment in the cell to which it is connected.
- Guarantees leak tightness between the cell flange and the drum during docking.
- Provides leaktightness and prevents contamination during drum docking / undocking on the cell.

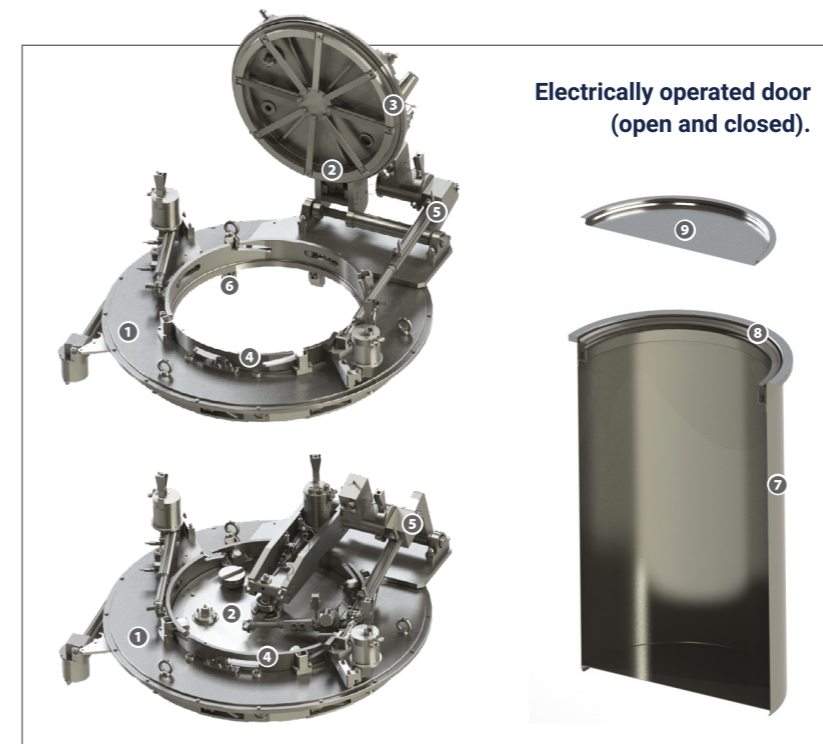
The CEFE is available in the following versions :

CEFE 560

- Painted steel drum, 200 litres.
- Stainless steel drum, 220 litres.

CEFE 695

- Stainless steel drum, 440 litres.



Electrically operated door (open and closed).

Description:

- 1 Cell flange (fixed part).
- 2 Cell door.
- 3 J3L seal on cell door.
- 4 Locking crown.
- 5 Door opening system - electrical version (pneumatic version available).
- 6 Drum locking option (cell flange).
- 7 Drum.
- 8 J4L seal on drum.
- 9 Drum lid with filter.



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La Calhène 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 La Calhène supplies 4 product lines: remote manipulators, transfer systems (the DPTE® range, standard and special applications), Glove Box ports, and shielded casks for transfer / transport. La Calhène 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:

