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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®).

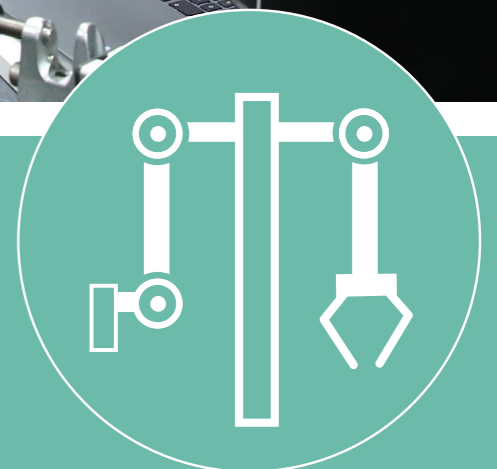
LaCalhene is an active member of:



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MT 200 TAO

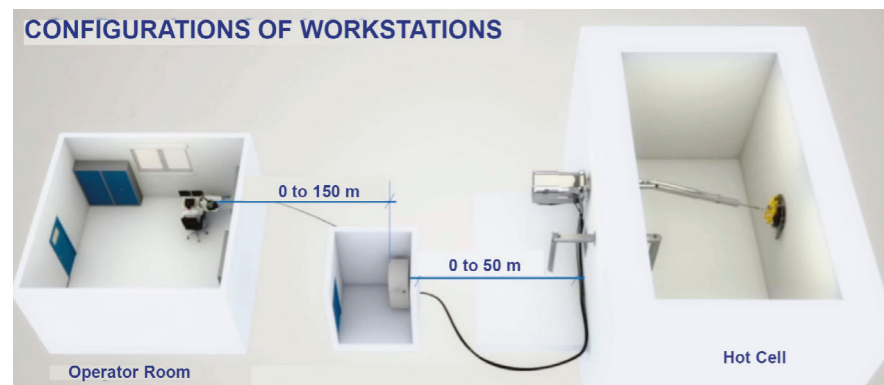
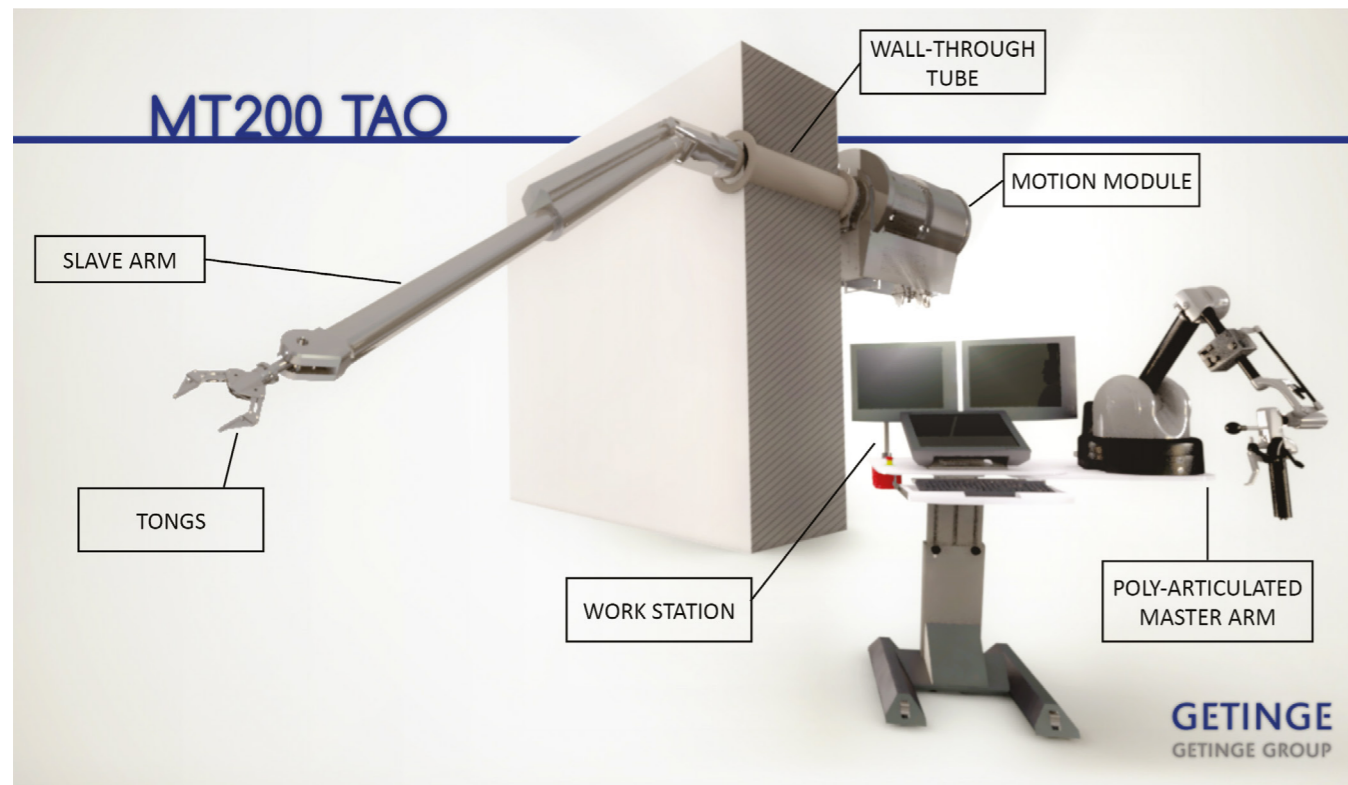
Electrically Assisted,
 Computer-Aided
 Manipulator



A new generation manipulator, fully electrically powered with software control

A new generation remote manipulator with electrical master arm and motion module with integrated software has been developed and installed in hot cells. The redesigned electrically powered manipulator with software control improves efficiency and ergonomics while increasing operating field space.

Efficiency is boosted by new functions including force feedback and robotic mode. In production, operators reported improved ergonomics and less fatigue. Use of the manipulator brought an increase in productivity coupled with a decrease in maintenance downtime, with consequent financial savings.



The absence of mechanical connection between the master arm and the slave arm means that the workstation can be situated up to 150 m from the hot cell.

Remote working contributes to operator security and ergonomics within the workstation.

Absence of mechanical connection

The mechanical link between the master arm and the slave arm is replaced by an electrical connection, hence the operator is free of system constraints and vice versa.

Motion Module

The MT 200 TAO motion module is compatible with the previous generation of MT 200 thru-tubes as well as those of the next generation Terman system.

Improved Force Feedback

Operator effort applied to the slave arm is multiplied by a ratio which reduces the physical effort required to lift and move loads. The offset function means that the operator can feel the interactions with the items manipulated.

Remote Work Stations

The workstation is no longer physically linked to the hot cell. The operator can work either with direct vision (window), or with camera vision anywhere within 150 m of the hot cell, thanks to the electrical link between the master and slave arms. The camera inside the hot cell is automatically enslaved onto the grip position. Greater distance means reduced dosimetry.

Maintenance Gains

During the qualification phase and in production, the system enabled a tremendous reduction in maintenance costs:

- MBTF (Mean Time Between Failures) doubled at the least, depending on the type of work
- reduced spare parts consumption
- decrease in waste

Robotic Mode

Repetitive tasks not requiring force feedback can be done in playback in robotic mode, reducing operator strain and improving speed.

Improved Slave Arm Working Volume

Tasks are simplified because the MT 200 TAO slave arm can reach the top of the hot cell. Working in the upper hemisphere is made possible, mainly thanks to the direct master/slave uncoupling.

Accessories

- Handling and installation lifting device,
- Storage trolley,
- Pneumatic ejection device for replacing the sealing booting,
- Parking fixture for tongs, jaws and sealed adaptor disconnection and connection,
- Maintenance tool kit,
- Tool for setting the slave arm into horizontal position (for the disconnectable model).

