

# A straight tongs system for remote manipulation in contained environments

## Design

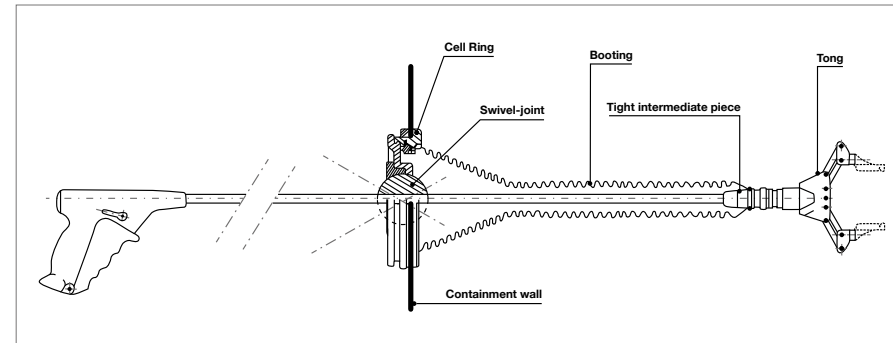
The system consists of:

- A Rod-Handle with tongs and equipped with a tight intermediate piece.
- A swivel joint mounted on a J2L system cell ring, to enable the operation of the tongs within a cone-shaped area defined either by the ball itself or by the thickness of the wall(s).
- A leaktight system comprising a booting mounted on an

- ejectable J2L system ring on the wall side and a tight intermediate piece, in a single piece with the booting, fixed between the tongs and the end of the Rod-Handle. The assembly provides continuity of containment and protects the rod and the swivel joint from contamination.
- A parking and disconnection fixture is available inside the hot cell. It is very easy to use for the tongs, tongs grippers or the tight intermediate piece.



Tight booting

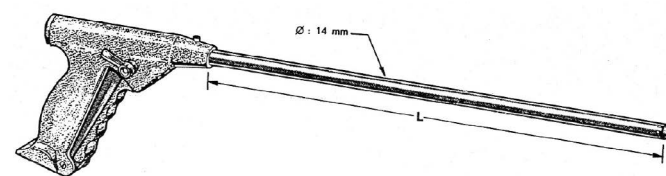


Assembly principle of a manipulation system by straight tongs

The straight tongs are mainly adapted to small size cells. They are suitable for simple handling operations or as occasional support. The Rod-Handle is easy to use and requires little maintenance. The straight tongs pass through a swivel joint which provides flexibility of movement (five degrees of freedom, with the gripper tightened). Various tongs and grippers are available to adapt the Rod-Handle to the application.

## Technical information

The rod standardized length L (see diagram below) range from 800 mm to 2000 mm (8 sizes available). From a 1500 mm length and beyond, a force-handle is necessary to assist remote manipulation.



PT 236 Remote Rod-Handle

Tightness is ensured by a booting mounted on a J2L system.



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